

Plainwell Dam #2 Area

examination of sediment data

Results from ARCADIS' Summer 2008 sampling event

Sediment data for Total PCBs

Overview of the following slides:

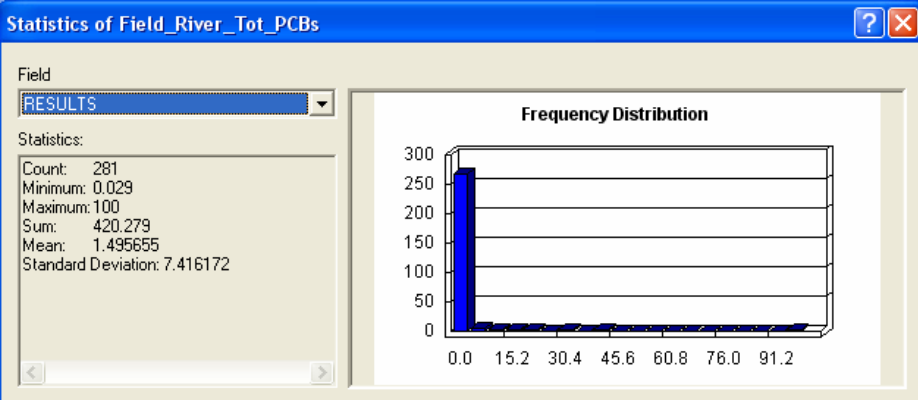
- concentrations of sediment PCBs by depth interval;
- maps of sediment PCBs by depth interval;
- examination of sediment PCBs in the oxbow and effects of removing these PCBs on the concentrations in the rest of the sediment;
- statistical demonstration of clustered (grouped) high PCBs in the oxbow;
- removal of the very high PCBs in the two cores at the entrance of the oxbow leads to no longer having a cluster of high values in the oxbow; and
- mass and volumes of PCBs that would be removed if a forty-foot reach out were used as in the Plainwell impoundment.

Sediment data for Total PCBs

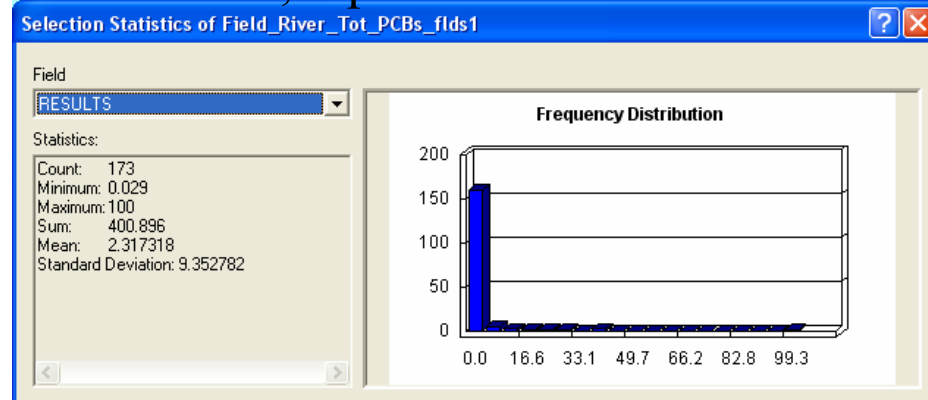
Descriptive Statistics

- 47 of 281 sediment samples analyzed (~17%) have Total PCBs ≥ 1.0 that are somewhat uniformly spread over the sampling area, although the higher values are concentrated in the oxbow to the southwest

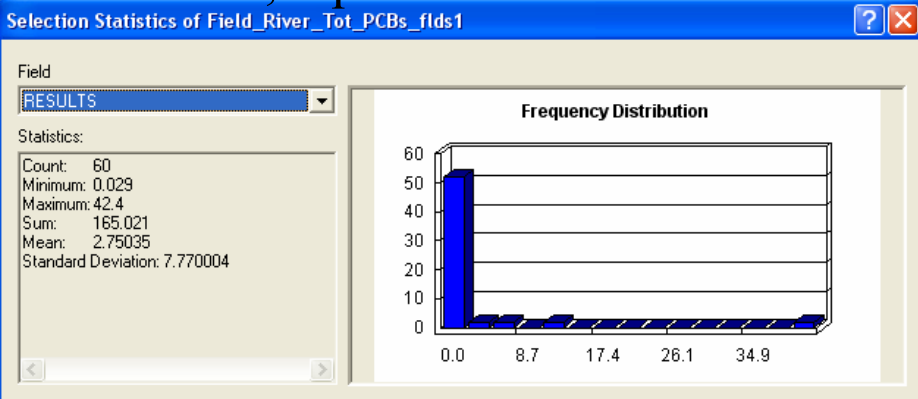
Total PCBs, all depths



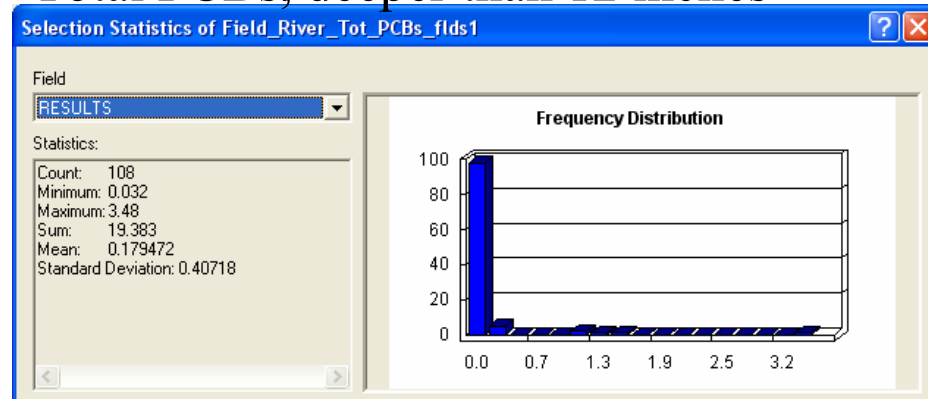
Total PCBs, top 12 inches



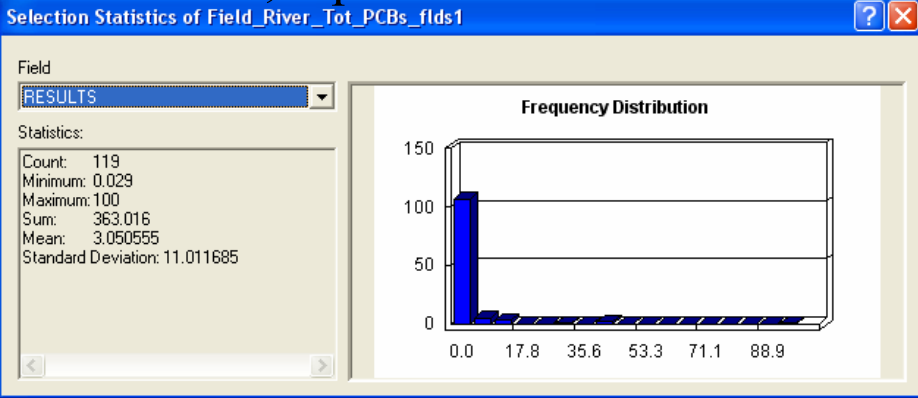
Total PCBs, top 2 inches



Total PCBs, deeper than 12 inches



Total PCBs, top 6 inches

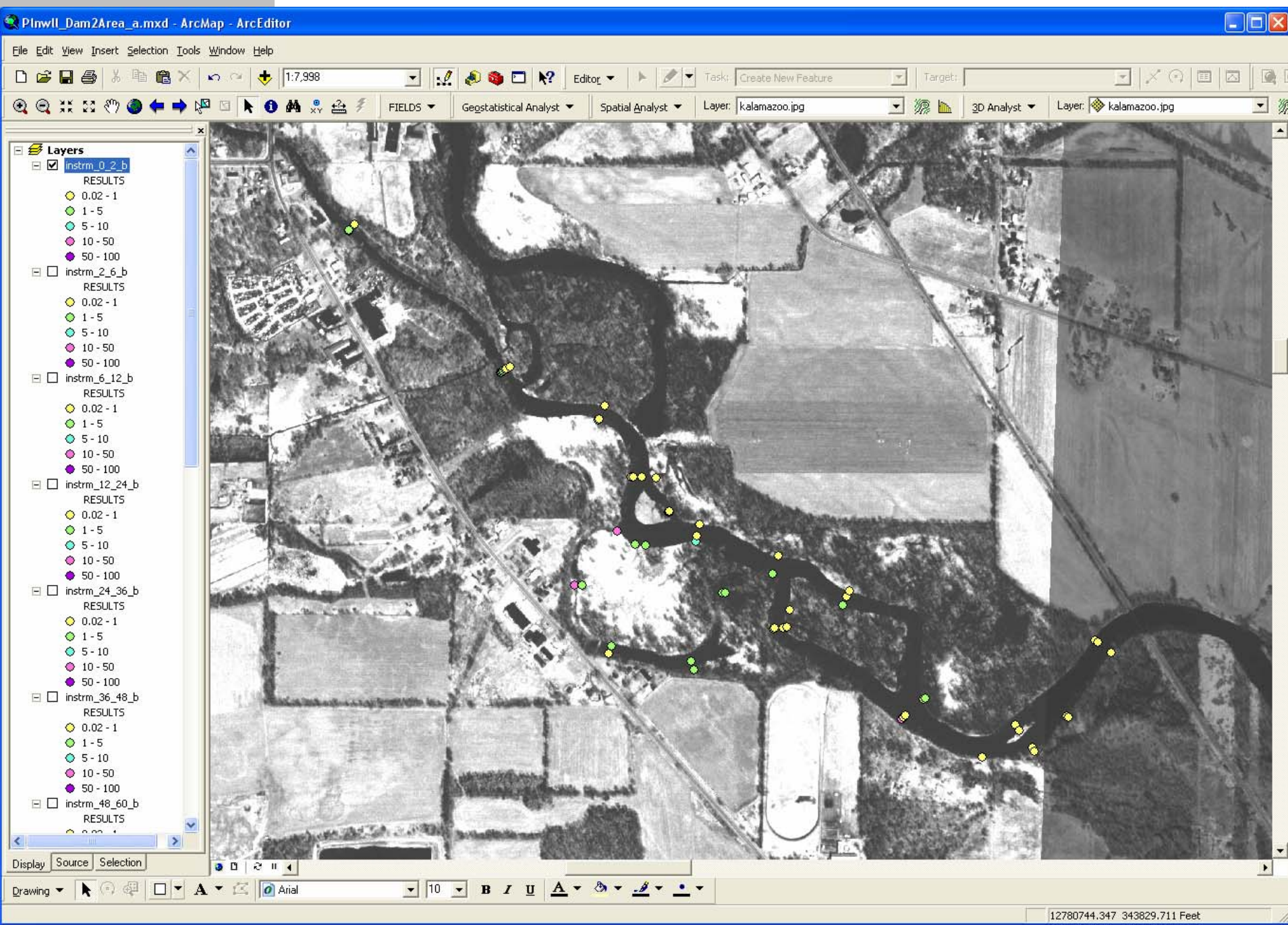


Sediment data for Total PCBs

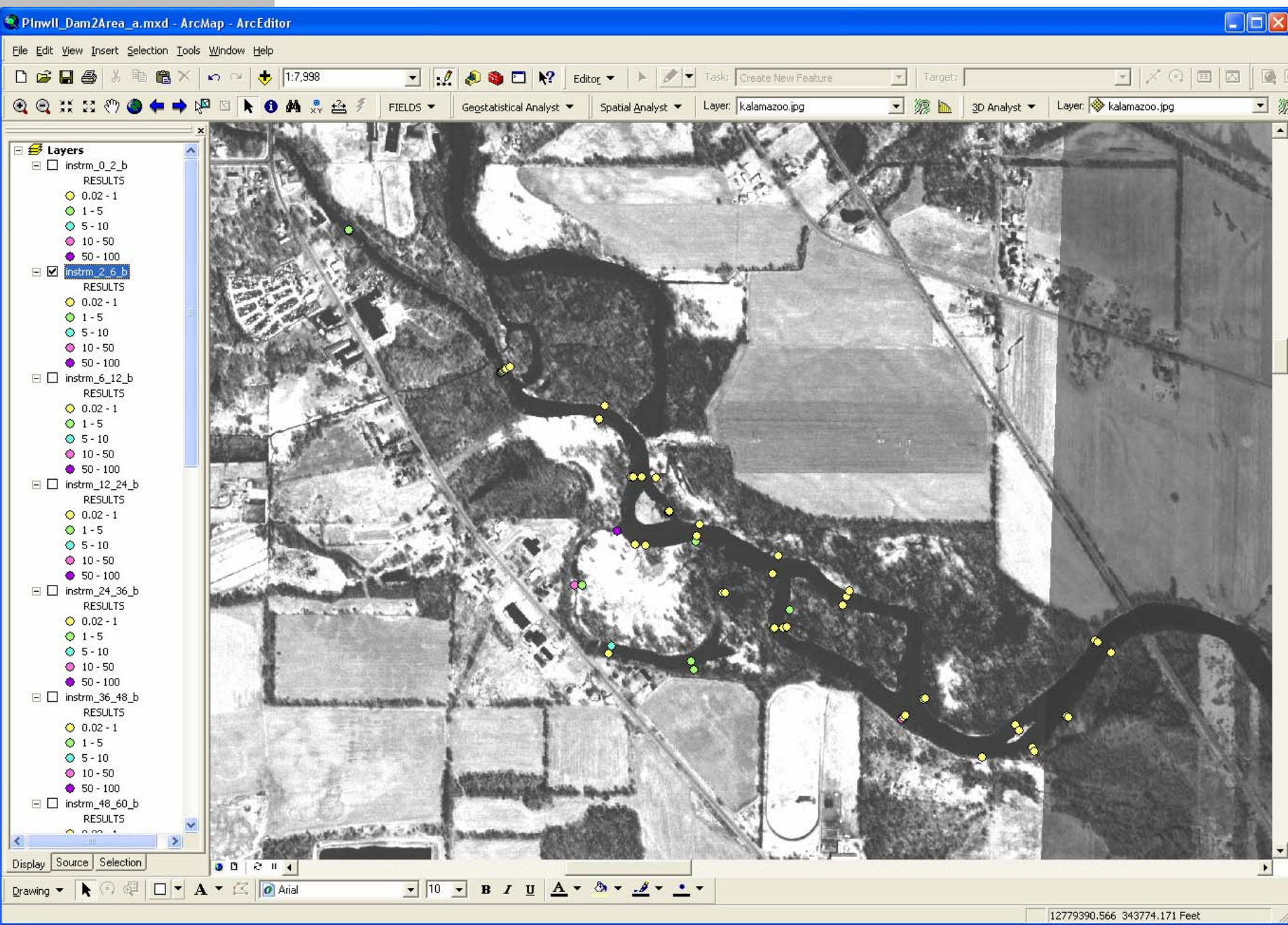
Data Posting (maps) of Depth-Weighted Average (DWA) Total PCBs by interval

- see following slides

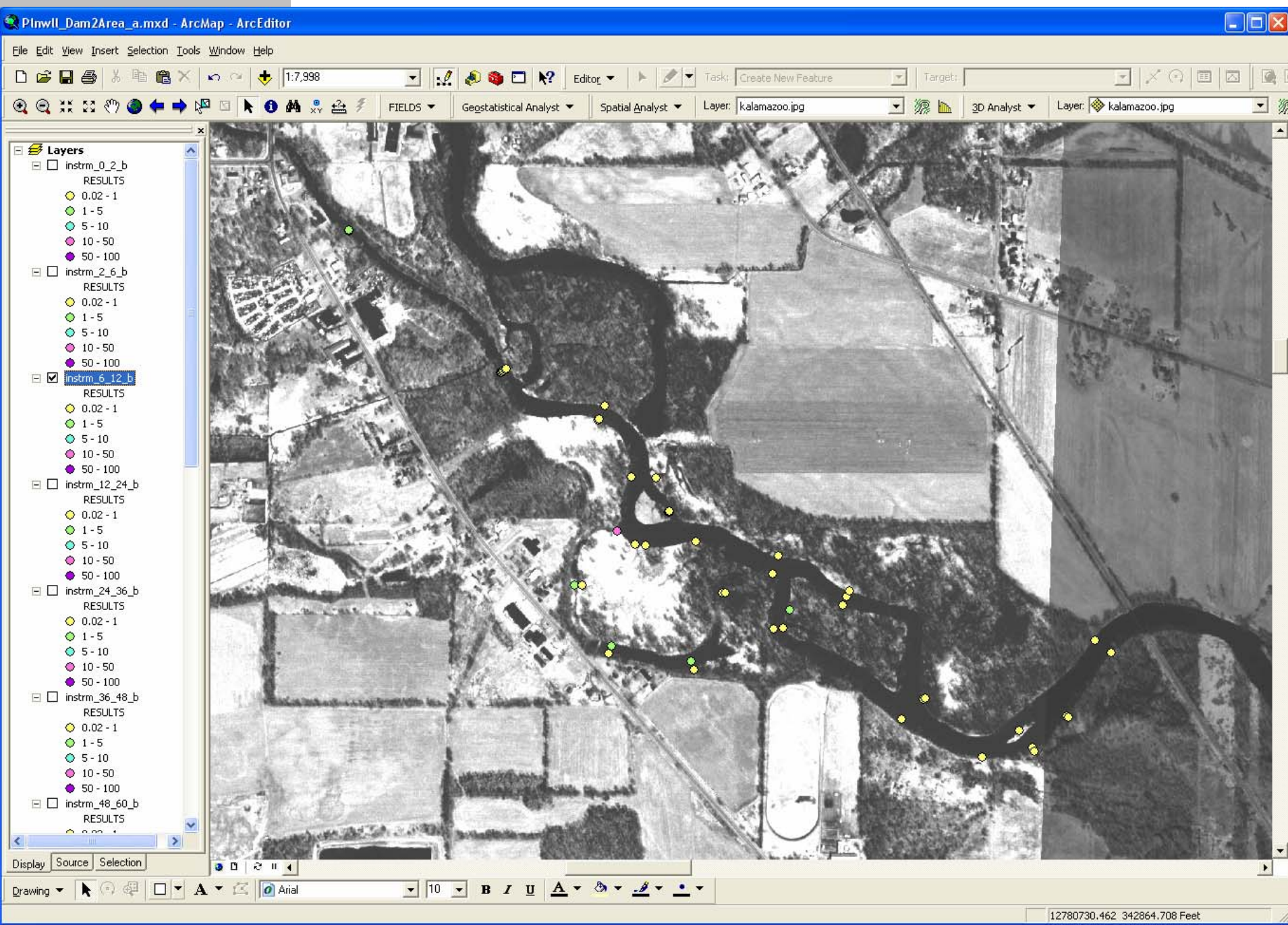
0-2" DWA interval



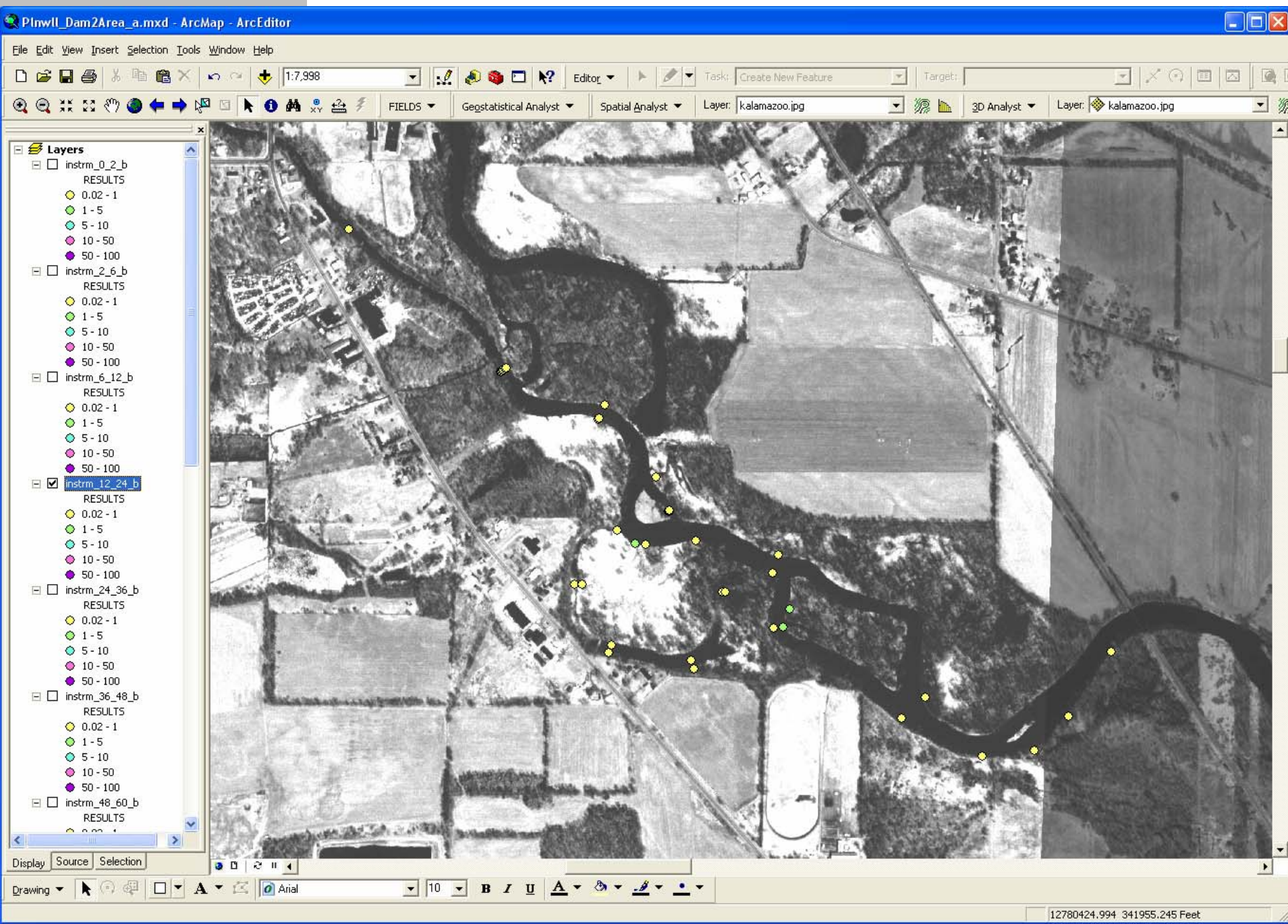
2-6" DWA interval



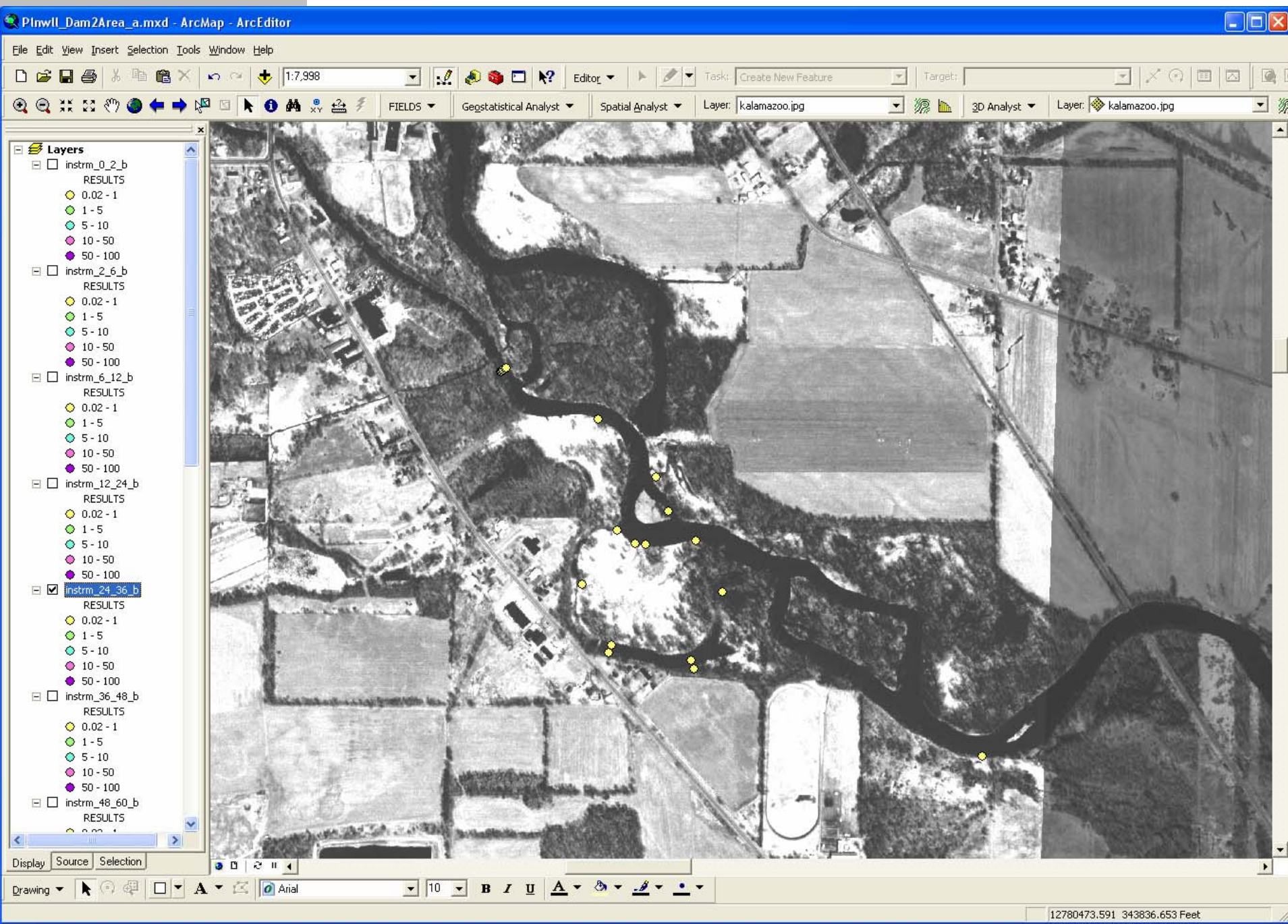
6-12" DWA interval



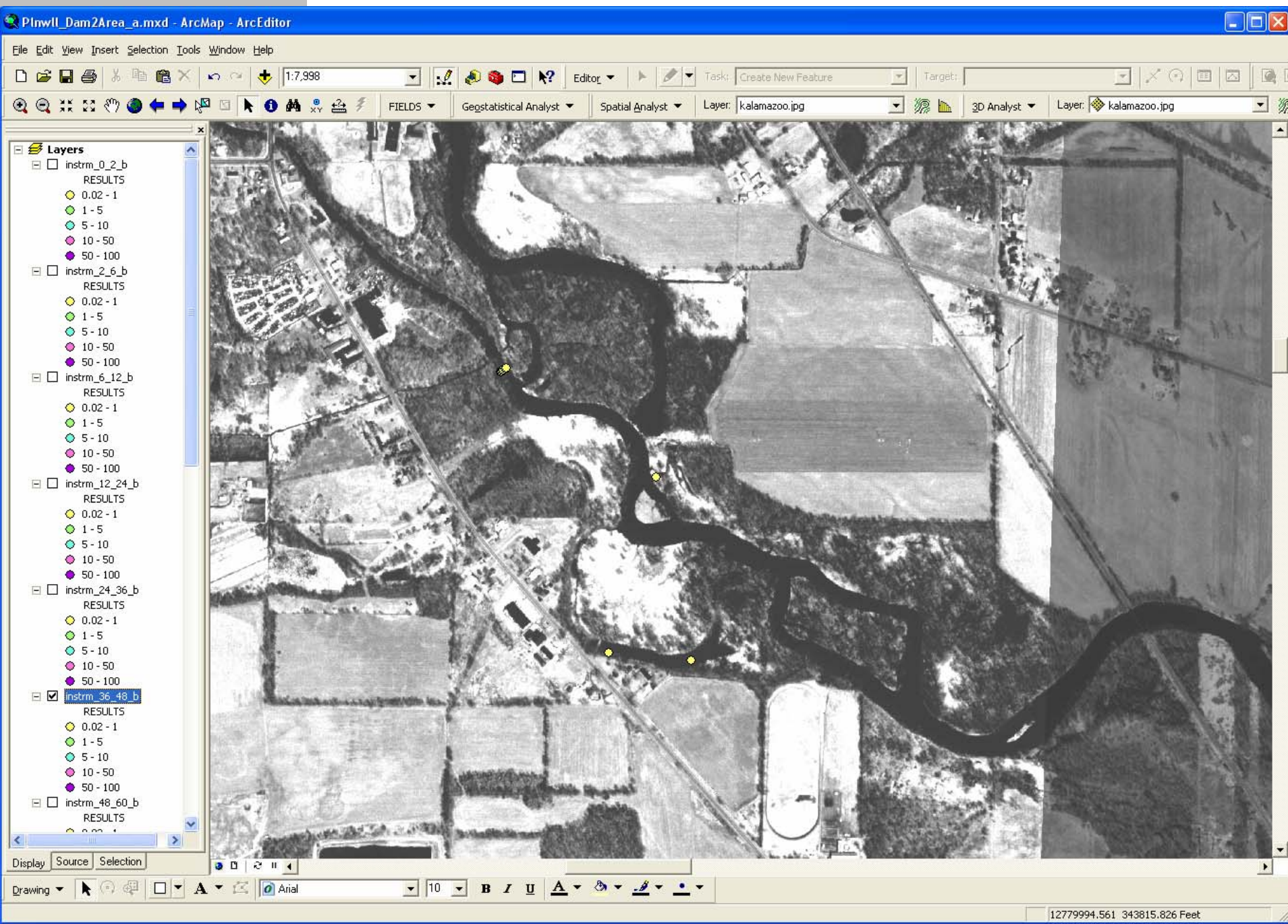
12-24" DWA interval



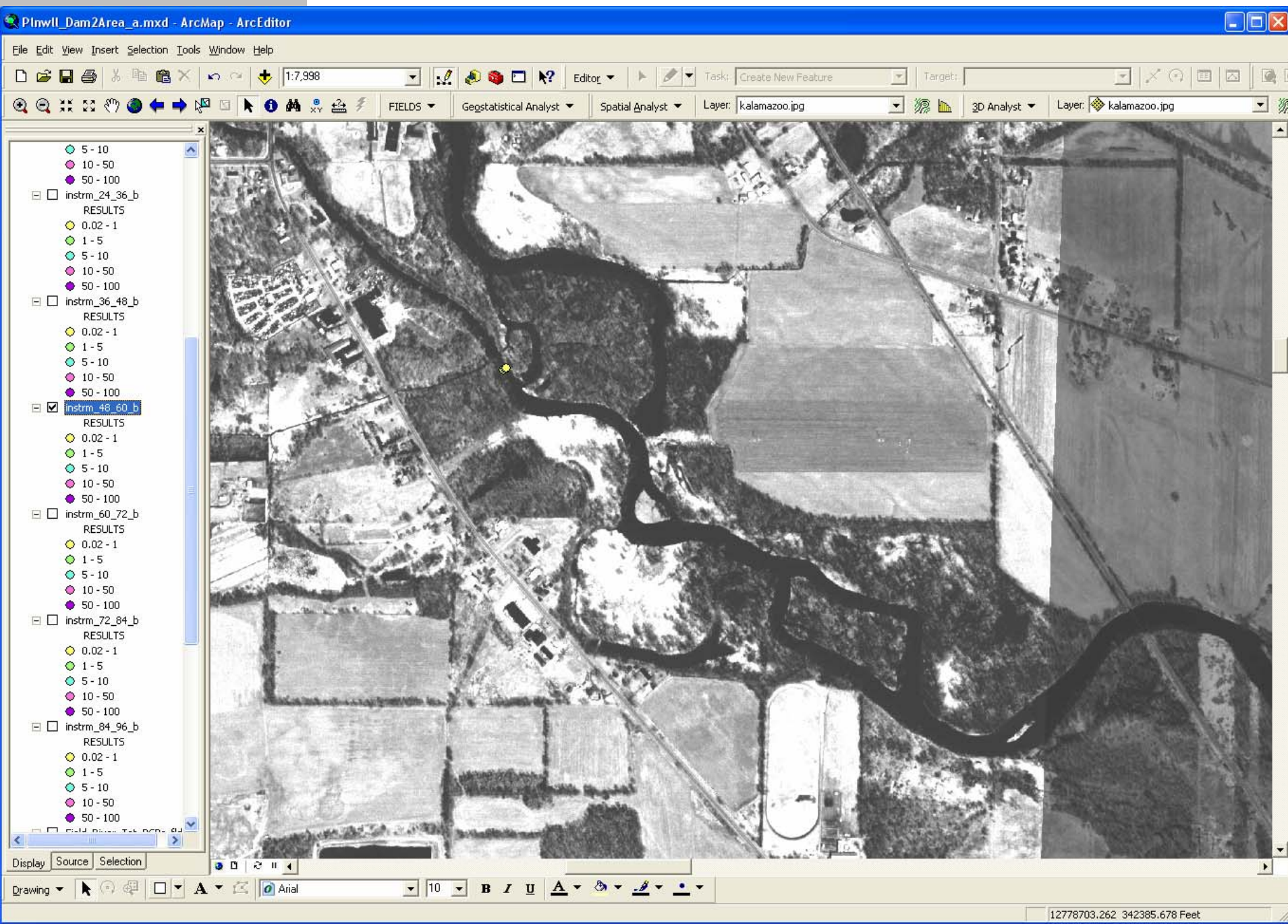
24-36" DWA interval



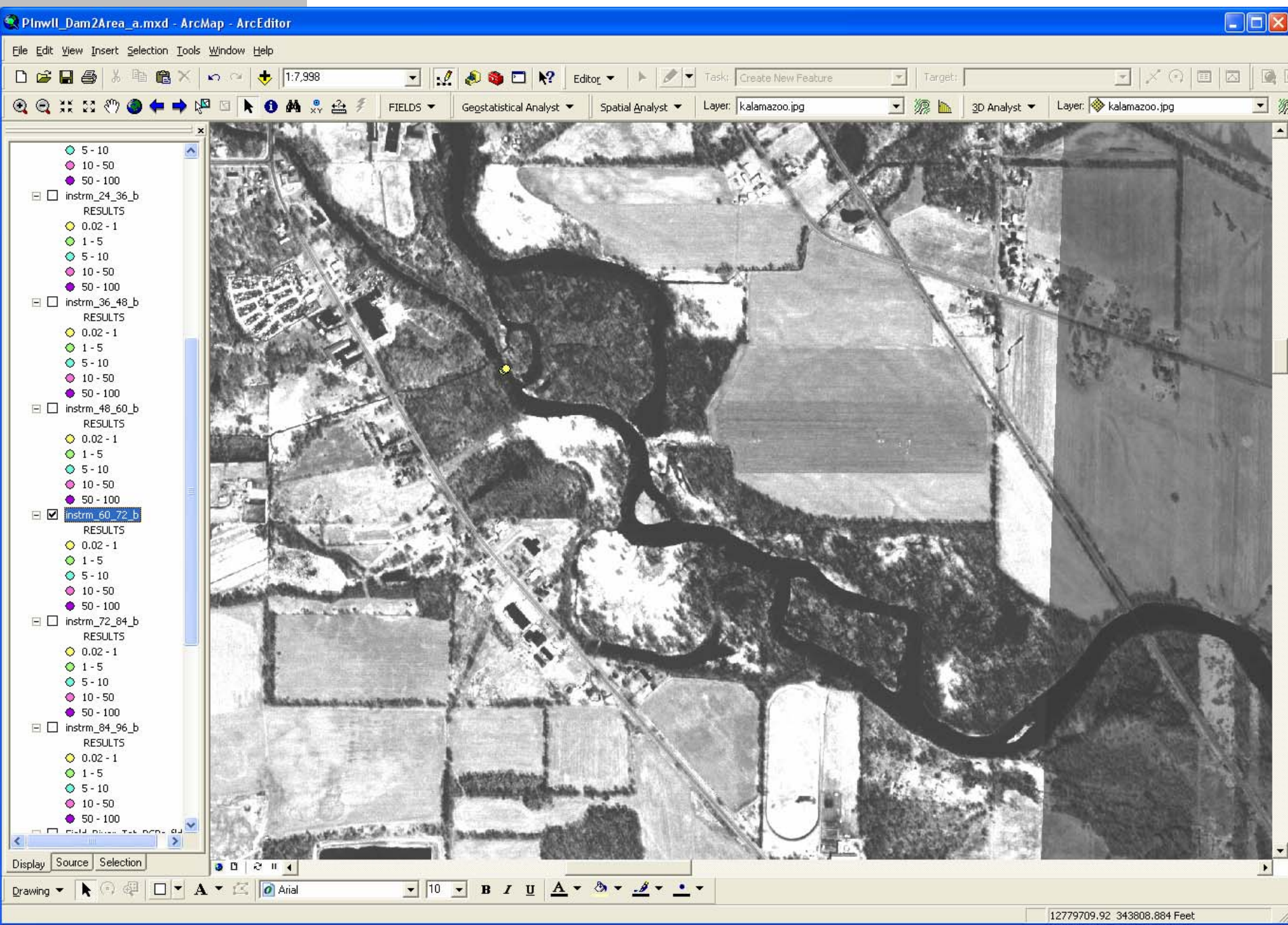
36-48" DWA interval



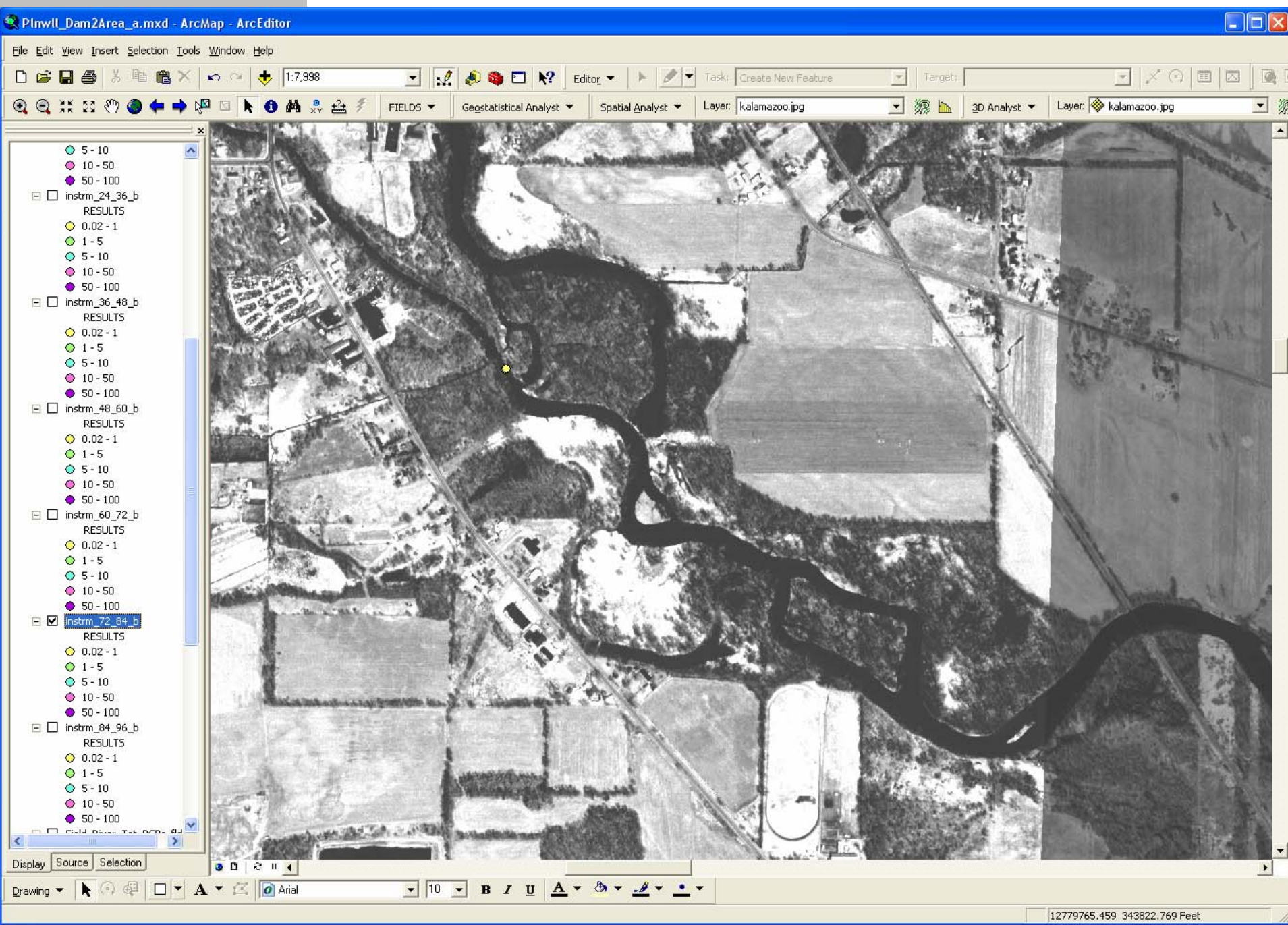
48-60" DWA interval



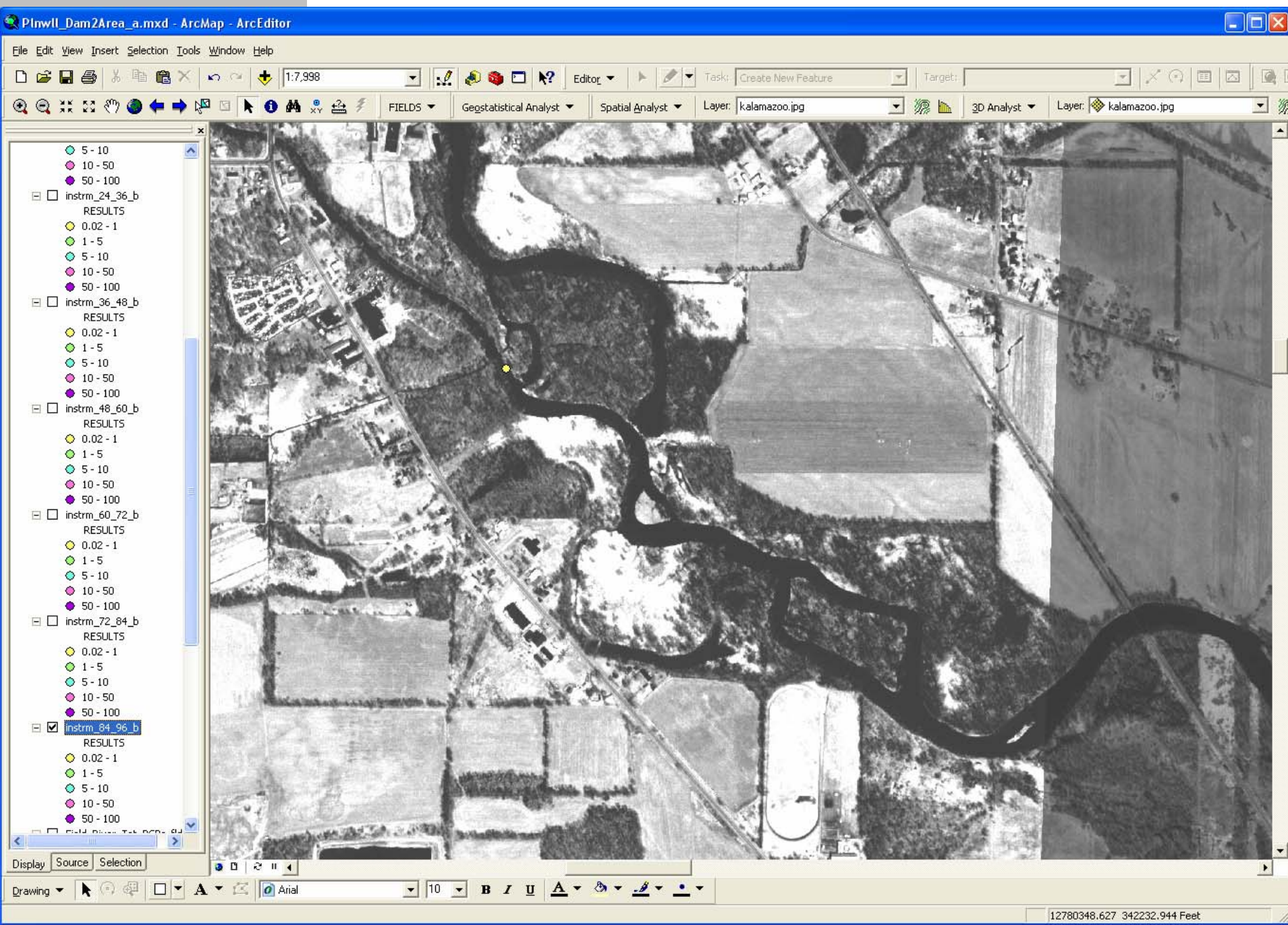
60-72" DWA interval



72-84" DWA interval



84-96" DWA interval



Sediment data for Total PCBs

Exploration of elevated Total PCBs in the southwest oxbow assuming that Total PCB values in sample cores P2RT-6-2 and P2RT-6-4 are removed.

- see following slides

Elevated PCBs within orange polygon

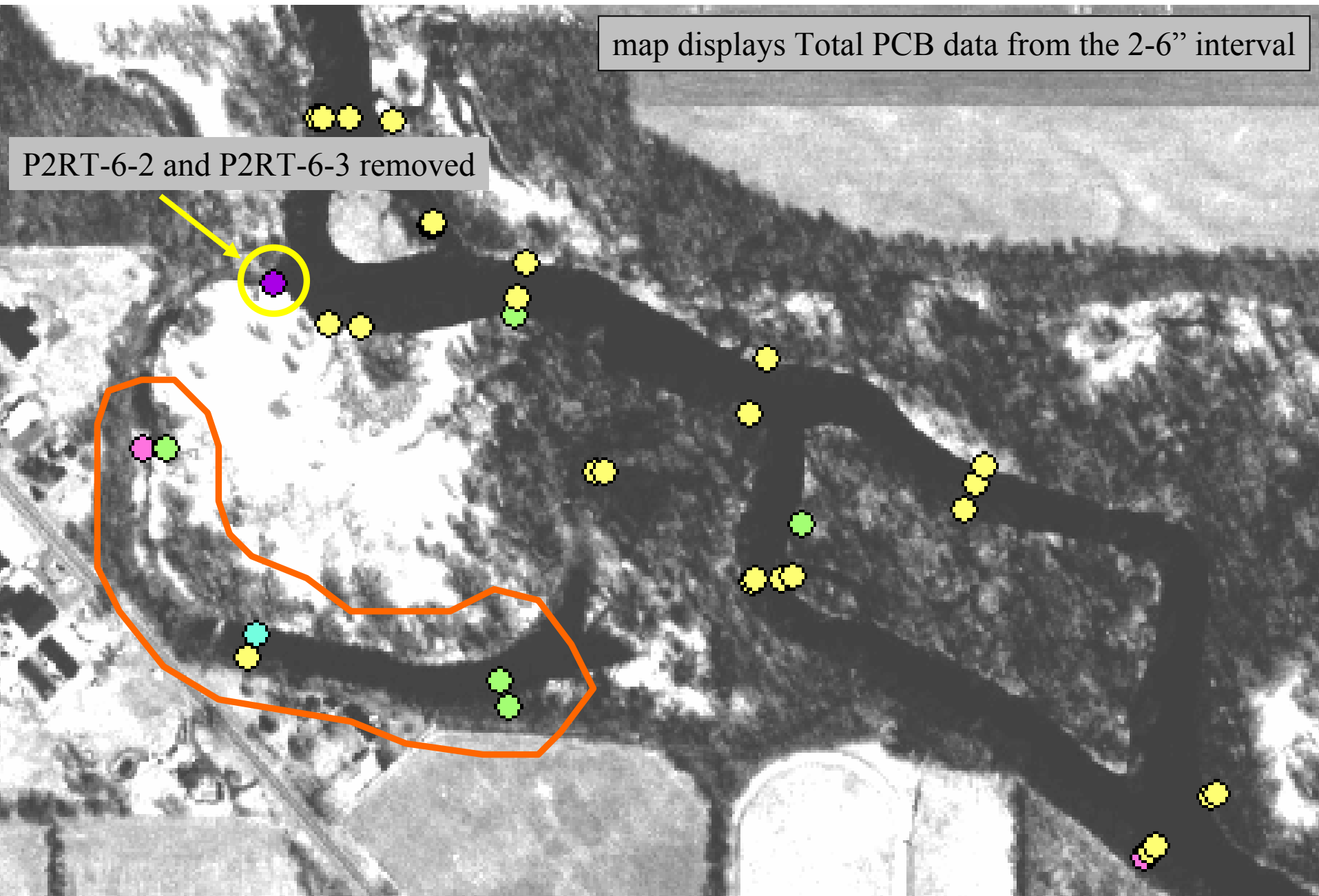
map displays Total PCB data from the 2-6" interval

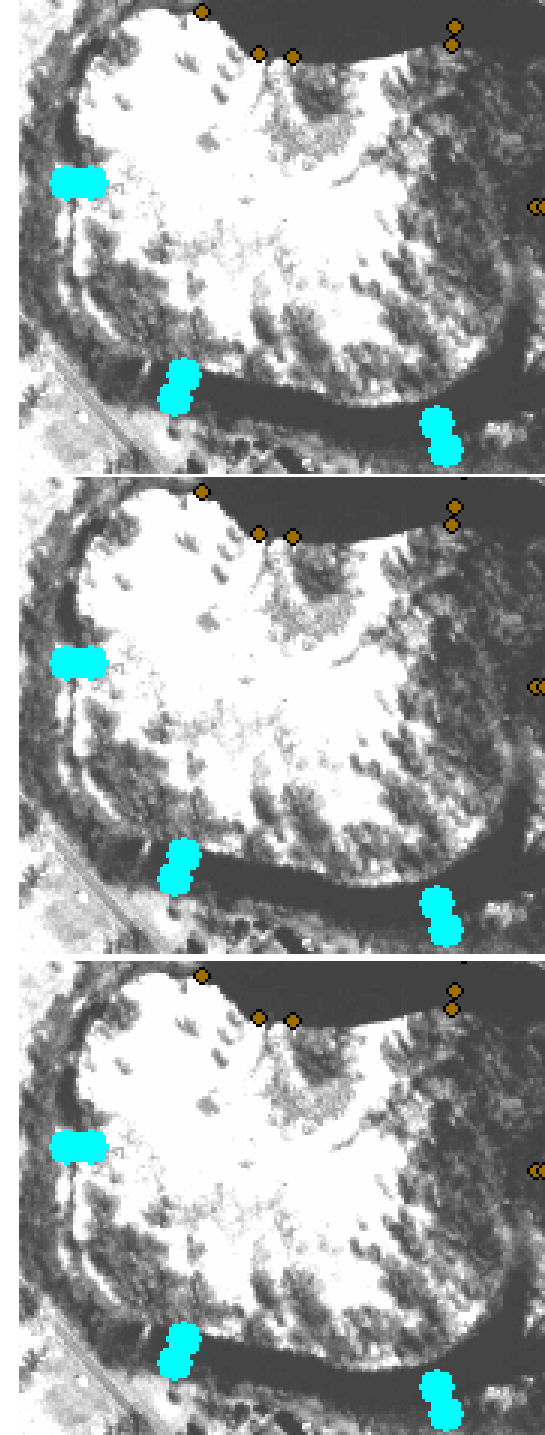
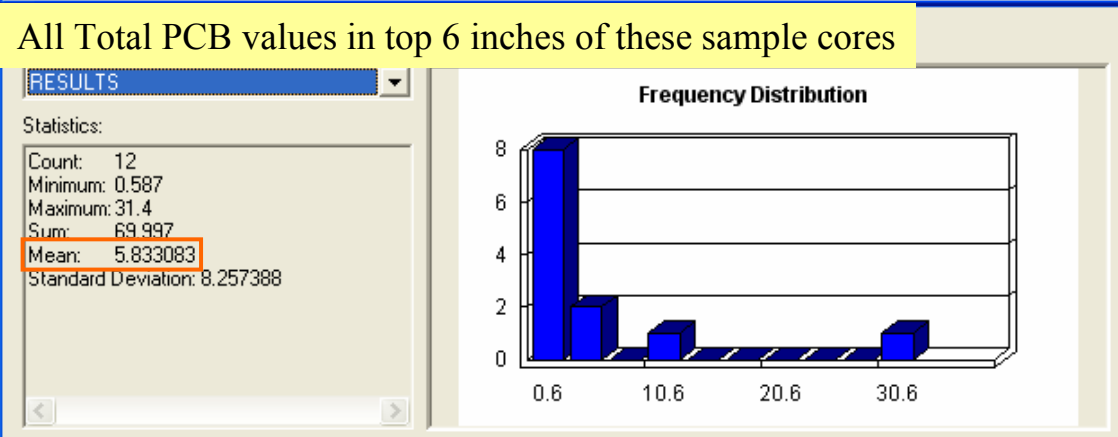
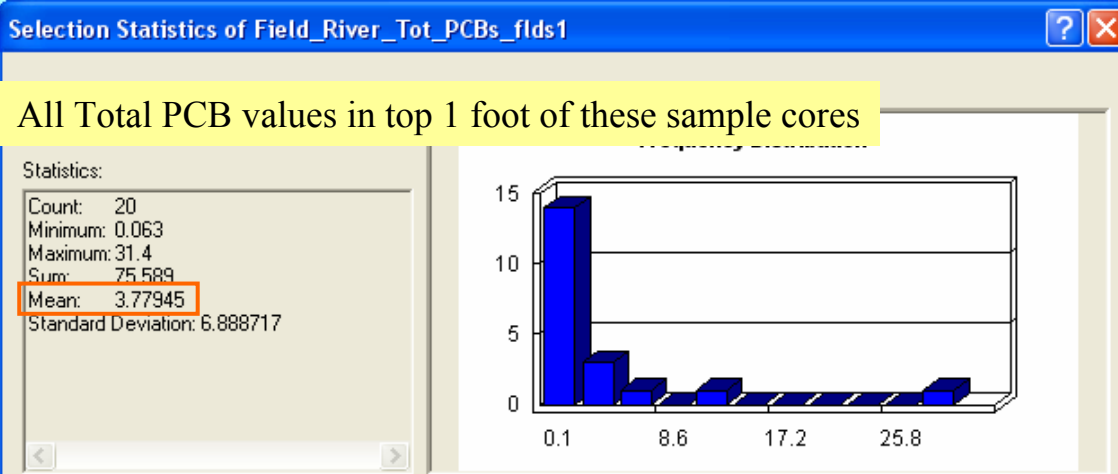
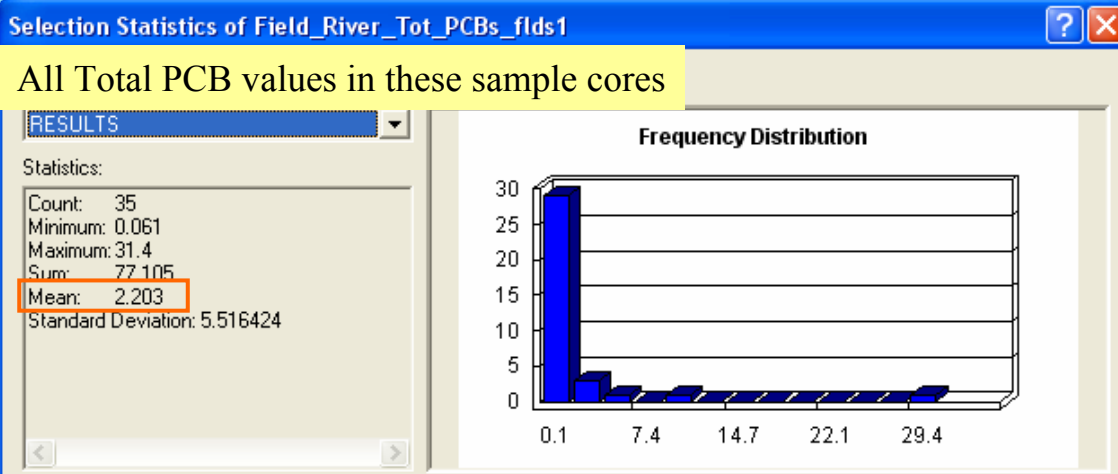
P2RT-6-2 and P2RT-6-3 removed

The map shows an aerial view of a river system. An orange polygon outlines a specific area on the left side of the river. A yellow circle highlights a purple star-shaped point. A yellow arrow points from the text 'P2RT-6-2 and P2RT-6-3 removed' to the purple point. The map displays various colored star-shaped points (yellow, green, cyan, magenta) representing different PCB data points. A text box in the top right corner states 'map displays Total PCB data from the 2-6" interval'.

map displays Total PCB data from the 2-6" interval

P2RT-6-2 and P2RT-6-3 removed





Sediment data for Total PCBs

Effect on Total PCBs concentrations in the river sediment if elevated PCBs in southwest oxbow are removed (see following slides).

- summary of changes in mean (average) and median PCB concentrations in the top 6 inches:

| | mean (average) | median |
|---|----------------|-----------|
| all sample cores | 3.04 ppm | 0.248 ppm |
| excluding P2RT-6-2 and P2RT-6-4 | 1.73 ppm | 0.231 ppm |
| excluding all oxbow cores | 1.25 ppm | 0.189 ppm |
| excluding all oxbow cores and P2RT-18-1 | 0.69 ppm | 0.183 ppm |

Legend:

α = 1.8 fold drop

β = 2.4 fold drop

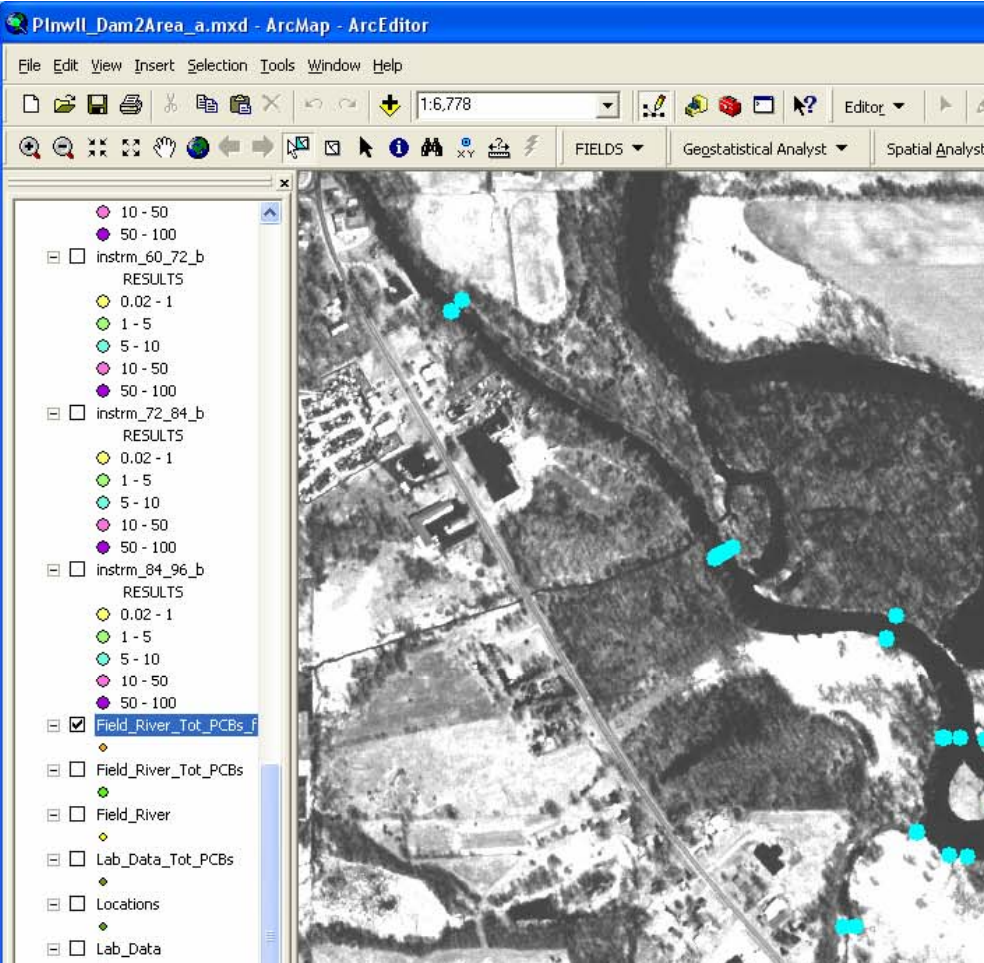
γ = 4.4 fold drop

δ = 1.1 fold drop

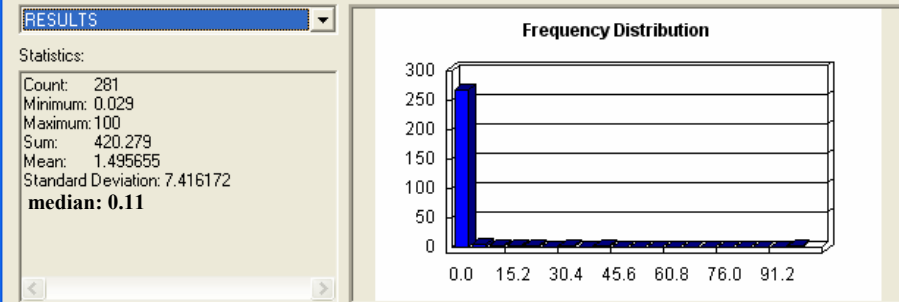
ϵ = 1.3 fold drop

ζ = 1.4 fold drop

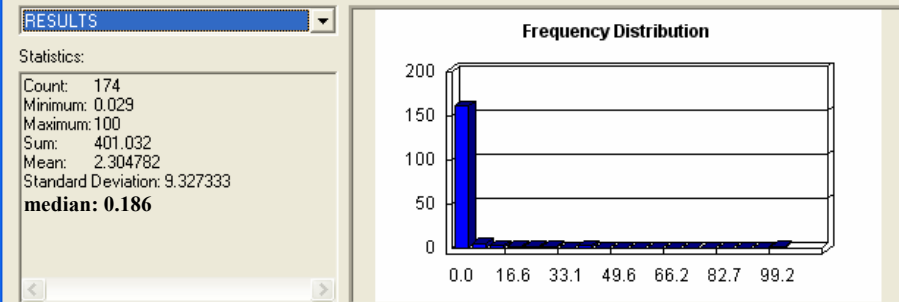
All sample locations and values



All Total PCB values in these sample cores

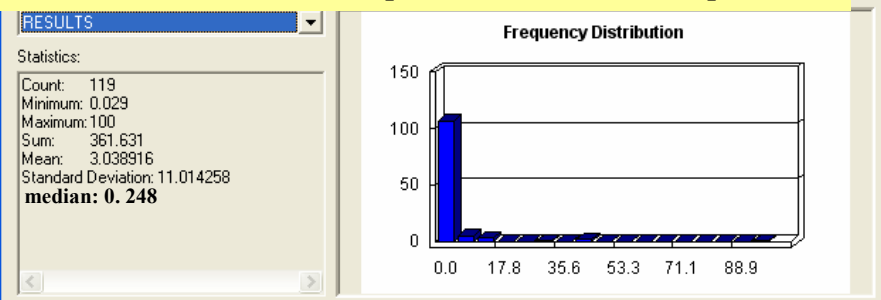


All Total PCB values in top 1 foot of these sample cores



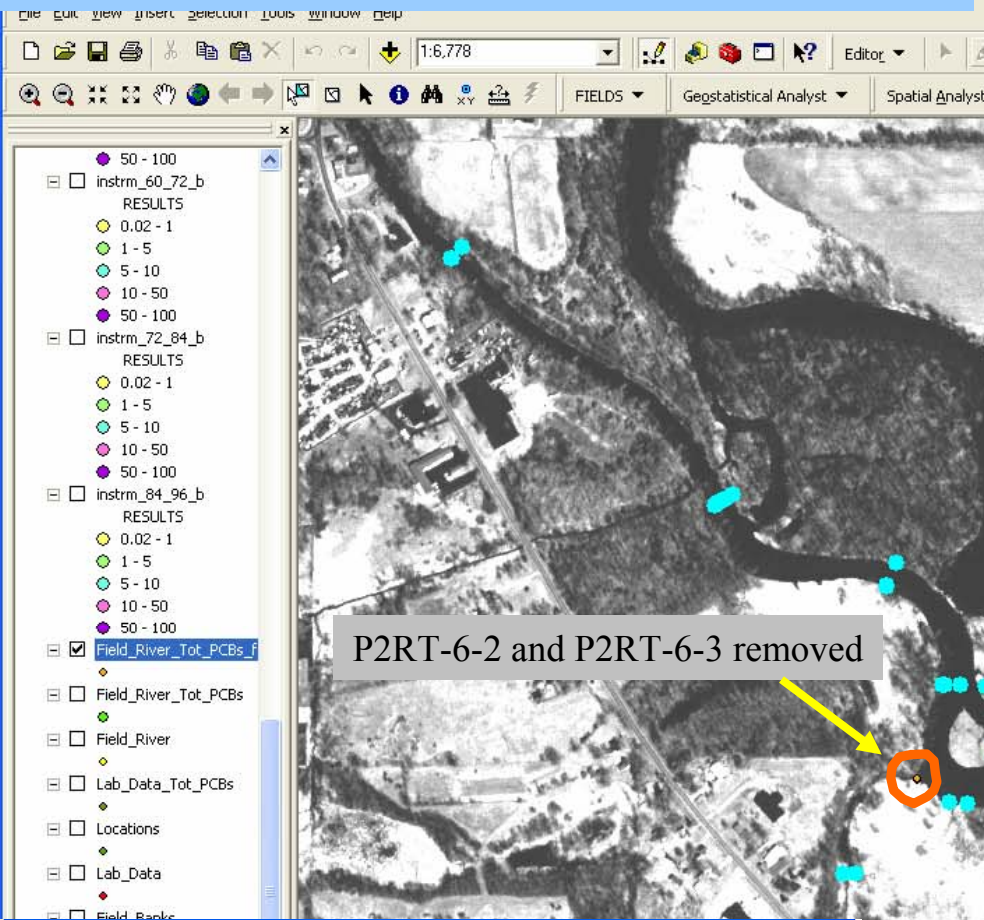
Selection Statistics of Field_River_Tot_PCBs_flds1

All Total PCB values in top 6 inches of these sample cores

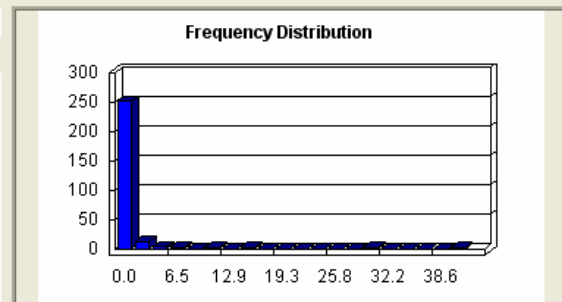
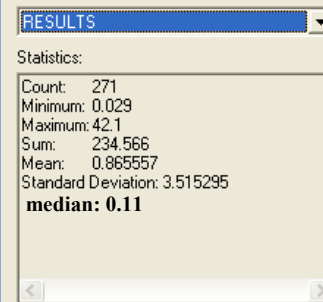


12780313.198 343607.023 Feet

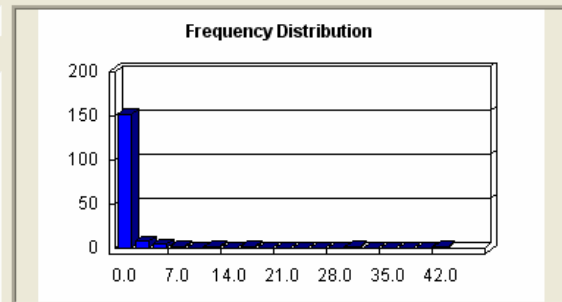
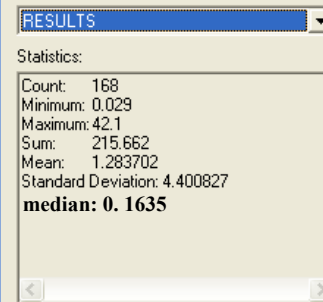
All sample locations and values, excluding orange polygon



All Total PCB values in these sample cores

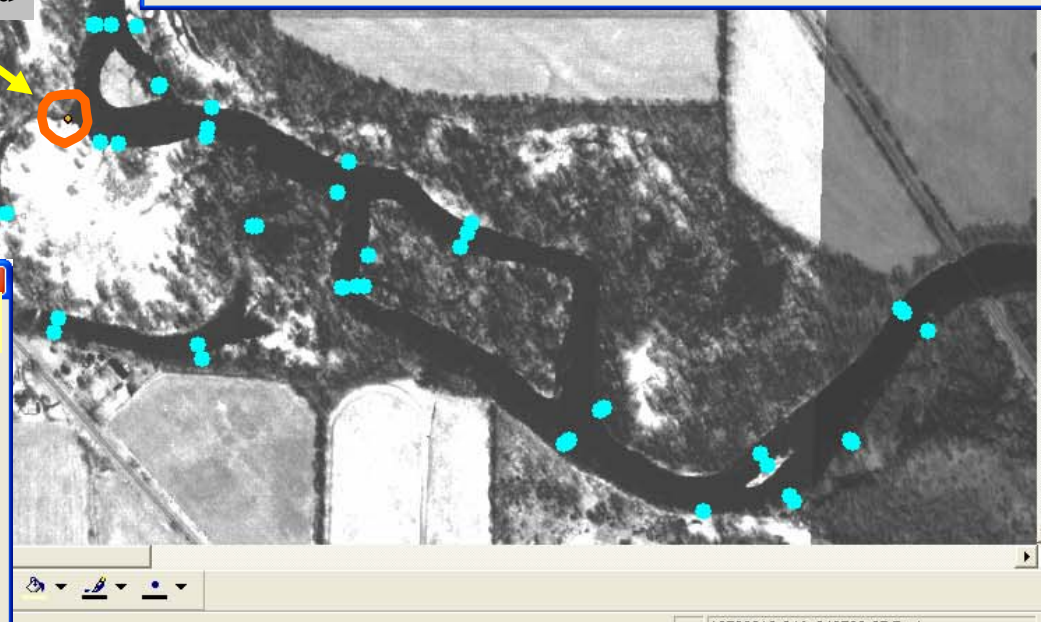
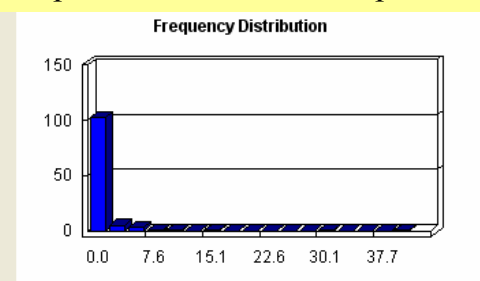
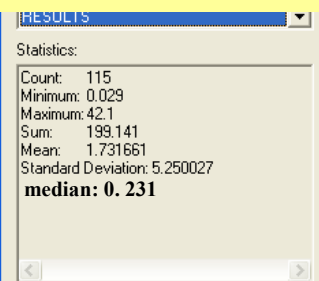


All Total PCB values in top 1 foot of these sample cores

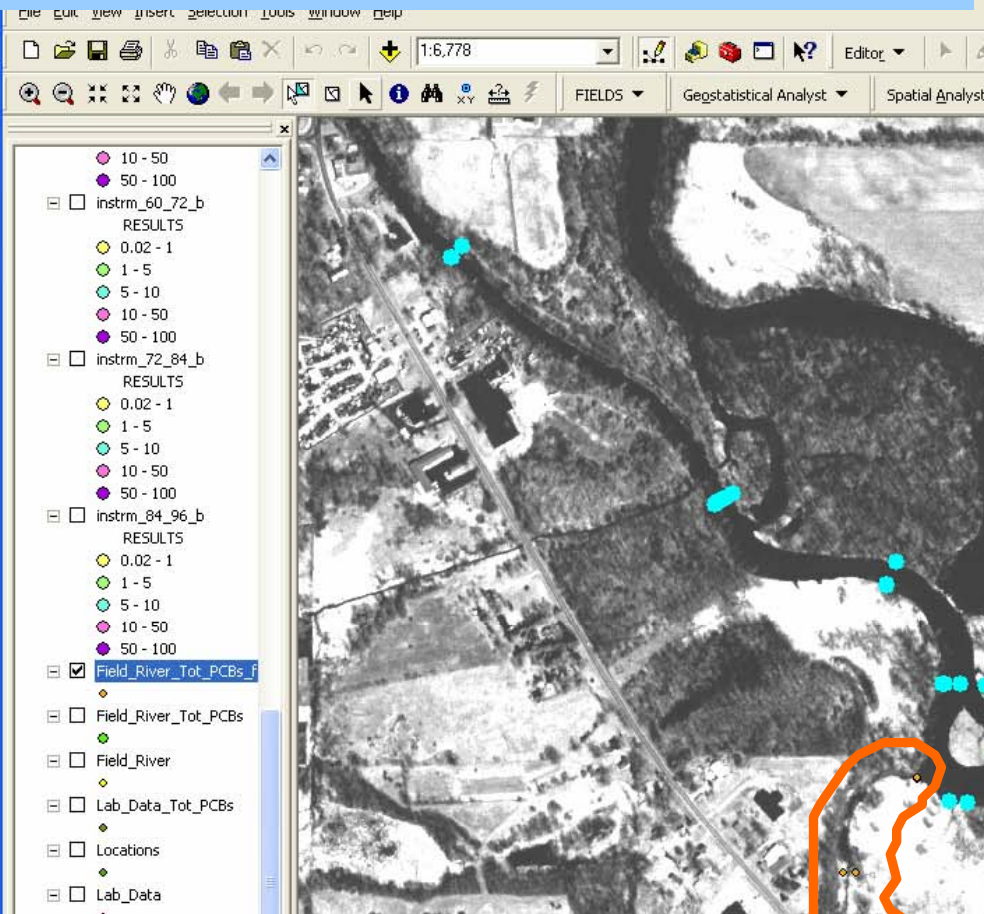


Selection Statistics of Field_River_Tot_PCBs_flds1

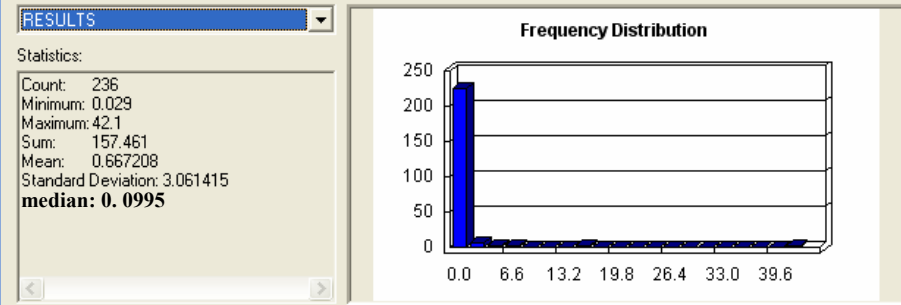
All Total PCB values in top 6 inches of these sample cores



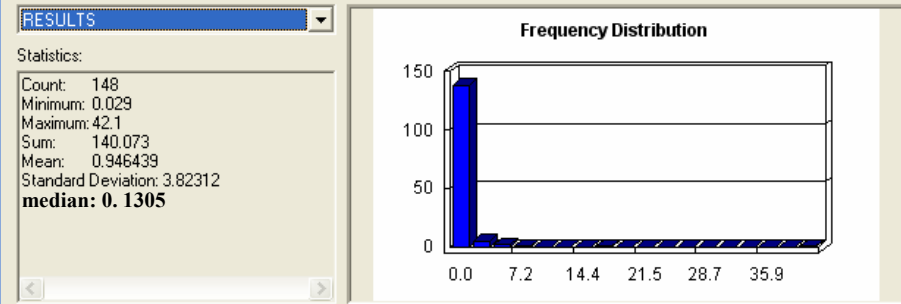
All sample locations and values, excluding orange polygon



All Total PCB values in these sample cores

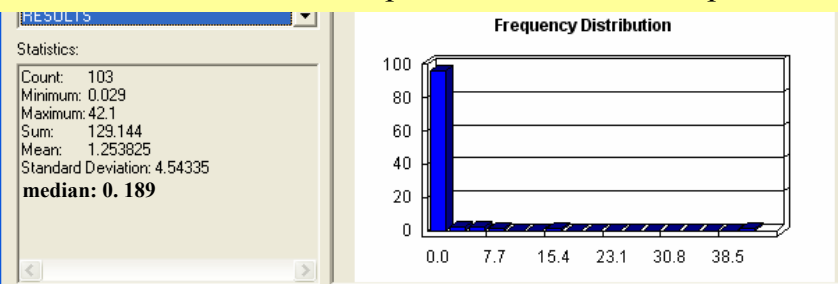


All Total PCB values in top 1 foot of these sample cores

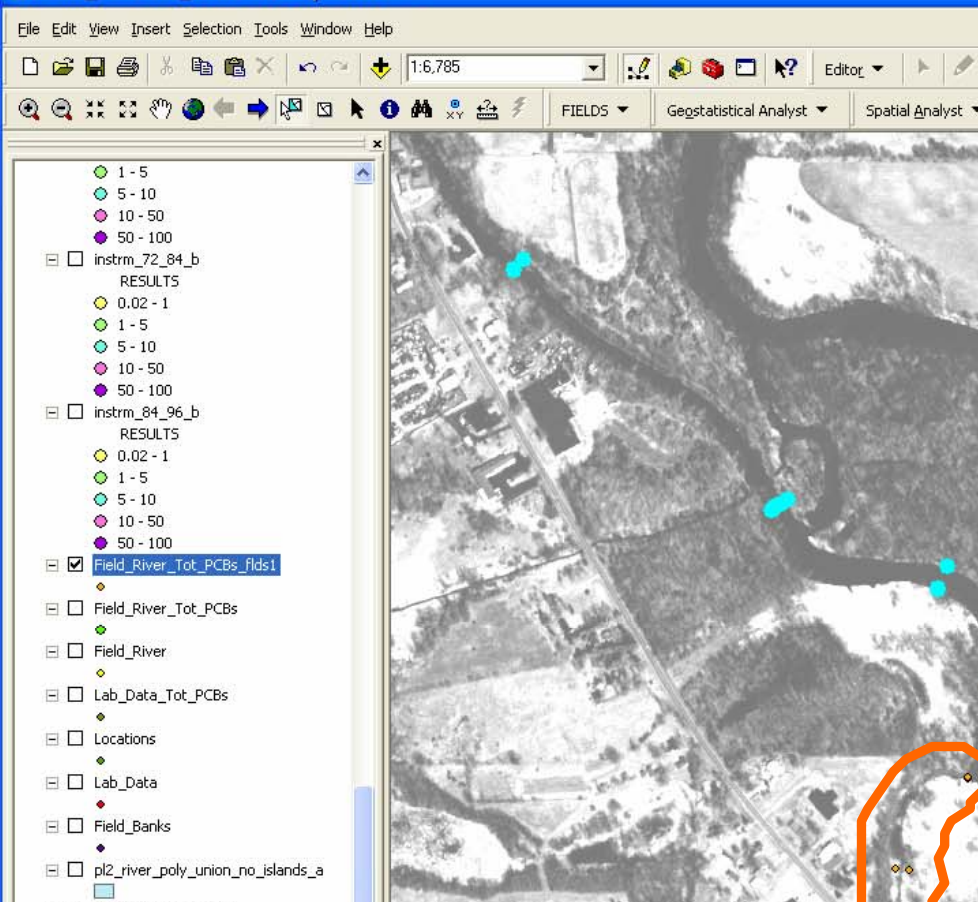


Selection Statistics of Field_River_Tot_PCBs_flds1

All Total PCB values in top 6 inches of these sample cores

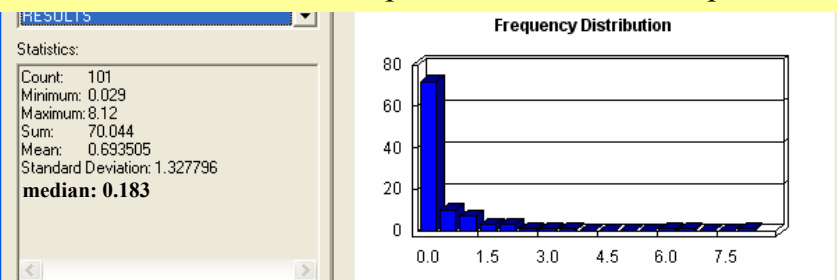


All sample locations and values, excluding orange polygons

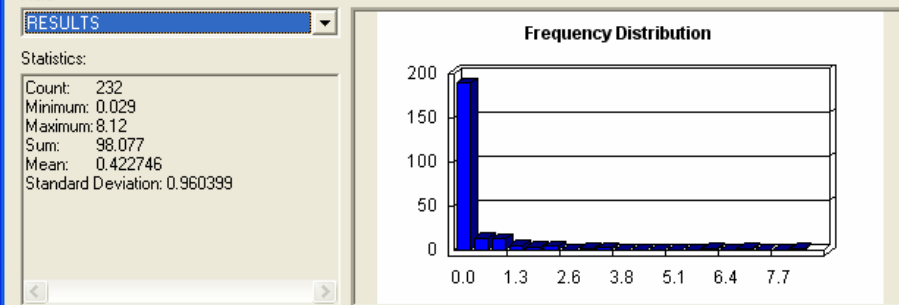


Selection Statistics of Field_River_Tot_PCBs_flds1

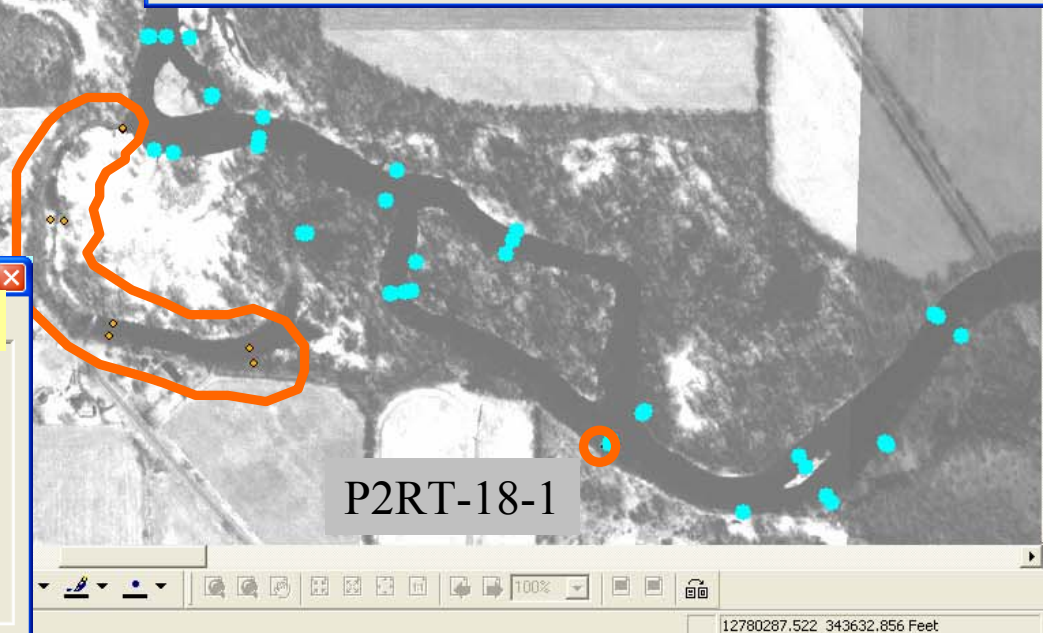
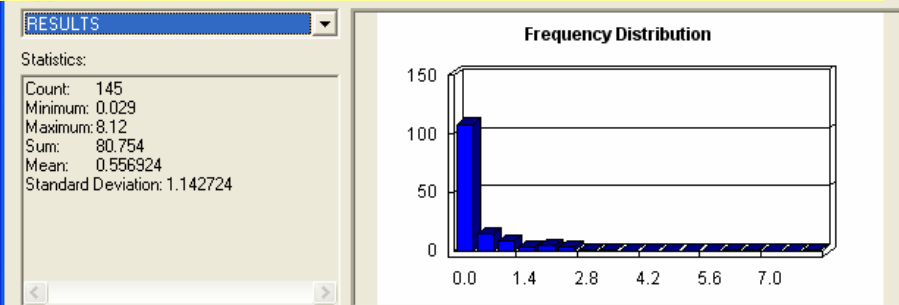
All Total PCB values in top 6 inches of these sample cores



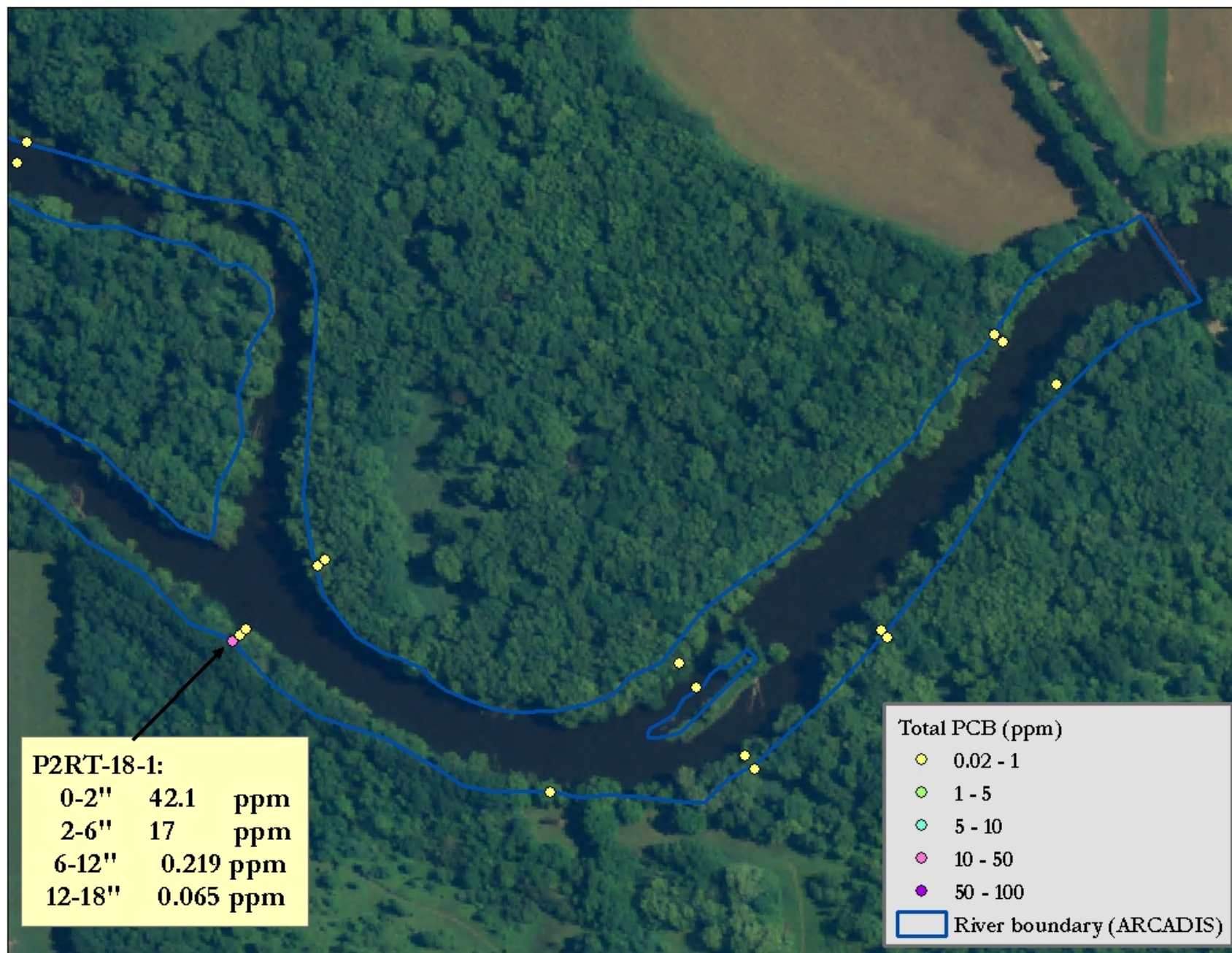
All Total PCB values in these sample cores



All Total PCB values in top 1 foot of these sample cores



Total PCB values in P2RT-18-1 core

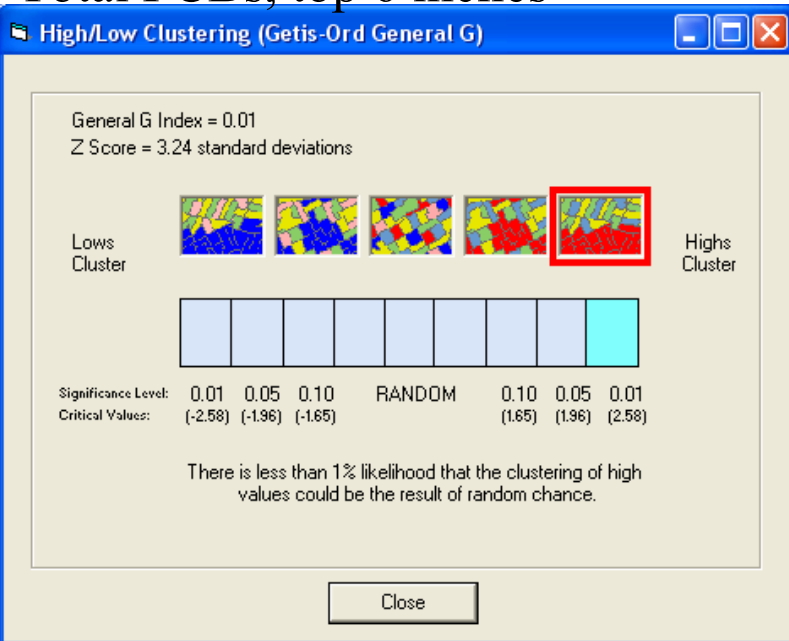


Sediment data for Total PCBs

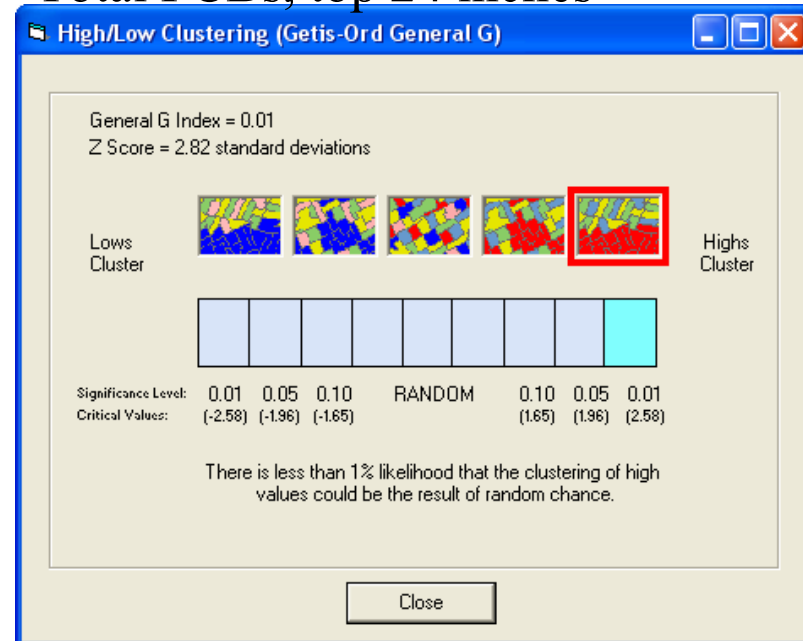
Cluster Analysis (Getis-Ord) of Total PCBs by thickness (see following slides)

- summary of results:
 - high values are clustered (grouped) near other high values, i.e., the oxbow

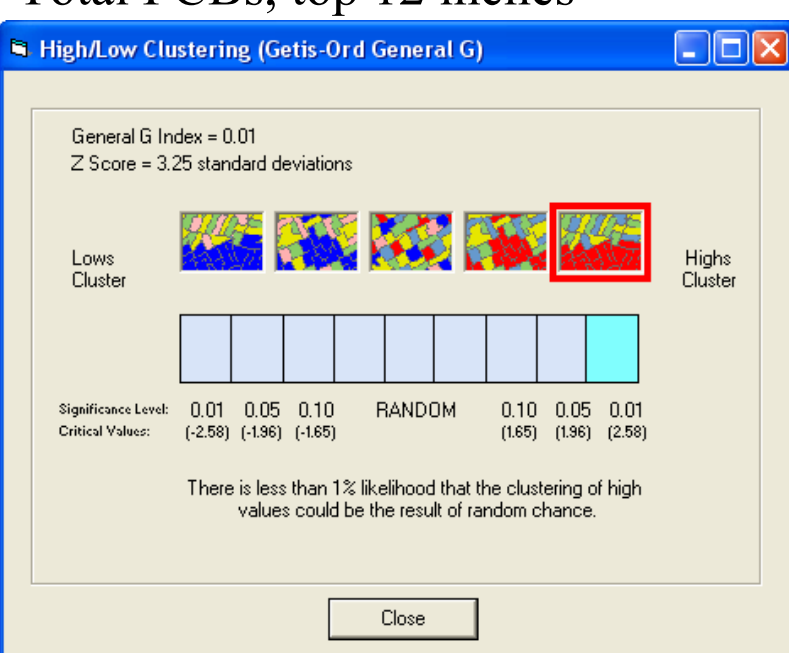
Total PCBs, top 6 inches



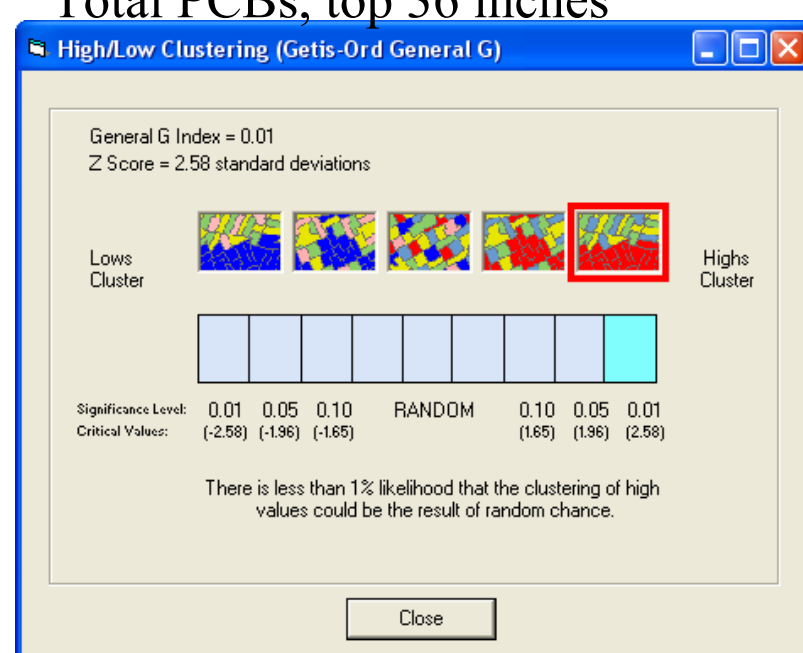
Total PCBs, top 24 inches



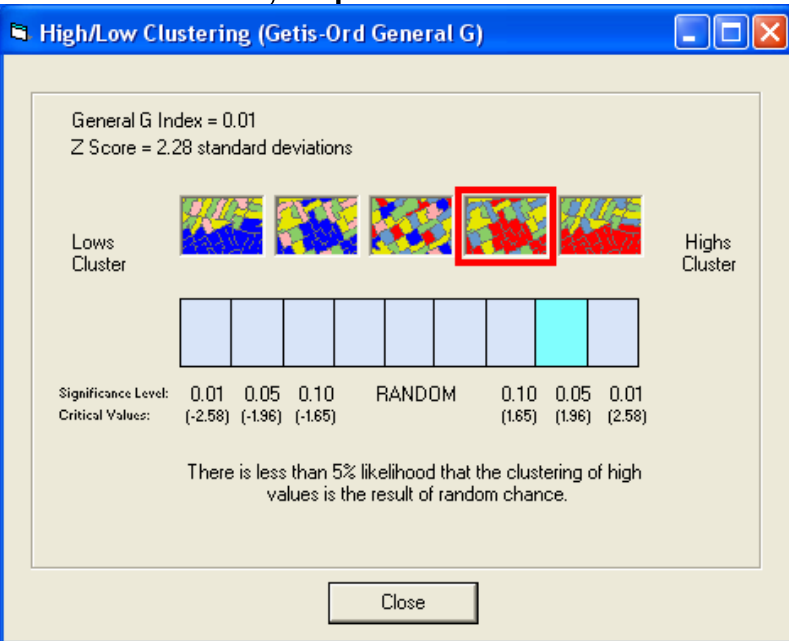
Total PCBs, top 12 inches



Total PCBs, top 36 inches



Total PCBs, top 48 inches



Sediment data for Total PCBs

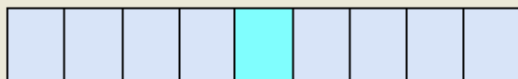
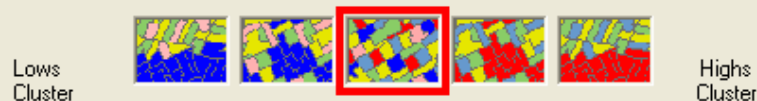
Cluster Analysis (Getis-Ord) of Total PCBs by thickness Total PCB values if sample cores P2RT-6-2 and P2RT-6-4 are removed (see following slides)

- summary of results:
 - no longer are high values clustered (grouped) near other high values, i.e., the oxbow cluster is gone

All Total PCB values in these sample cores

General G Index = 0

Z Score = -0.74 standard deviations



Significance Level: 0.01 0.05 0.10 RANDOM 0.10 0.05 0.01
Critical Values: (-2.58) (-1.96) (-1.65) (1.65) (1.96) (2.58)

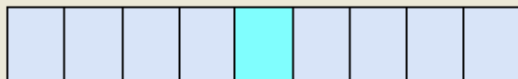
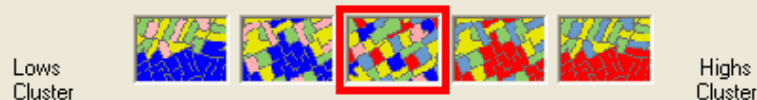
No apparent clustering is detected at this scale.

Close

All Total PCB values in top 1 foot of these sample cores

General G Index = 0

Z Score = -0.42 standard deviations



Significance Level: 0.01 0.05 0.10 RANDOM 0.10 0.05 0.01
Critical Values: (-2.58) (-1.96) (-1.65) (1.65) (1.96) (2.58)

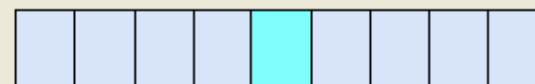
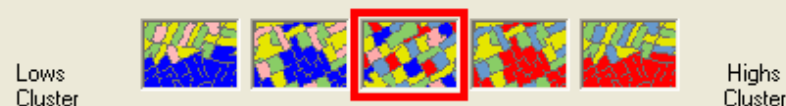
No apparent clustering is detected at this scale.

Close

All Total PCB values in top 6 inches of these sample cores

General G Index = 0

Z Score = -0.38 standard deviations



Significance Level: 0.01 0.05 0.10 RANDOM 0.10 0.05 0.01
Critical Values: (-2.58) (-1.96) (-1.65) (1.65) (1.96) (2.58)

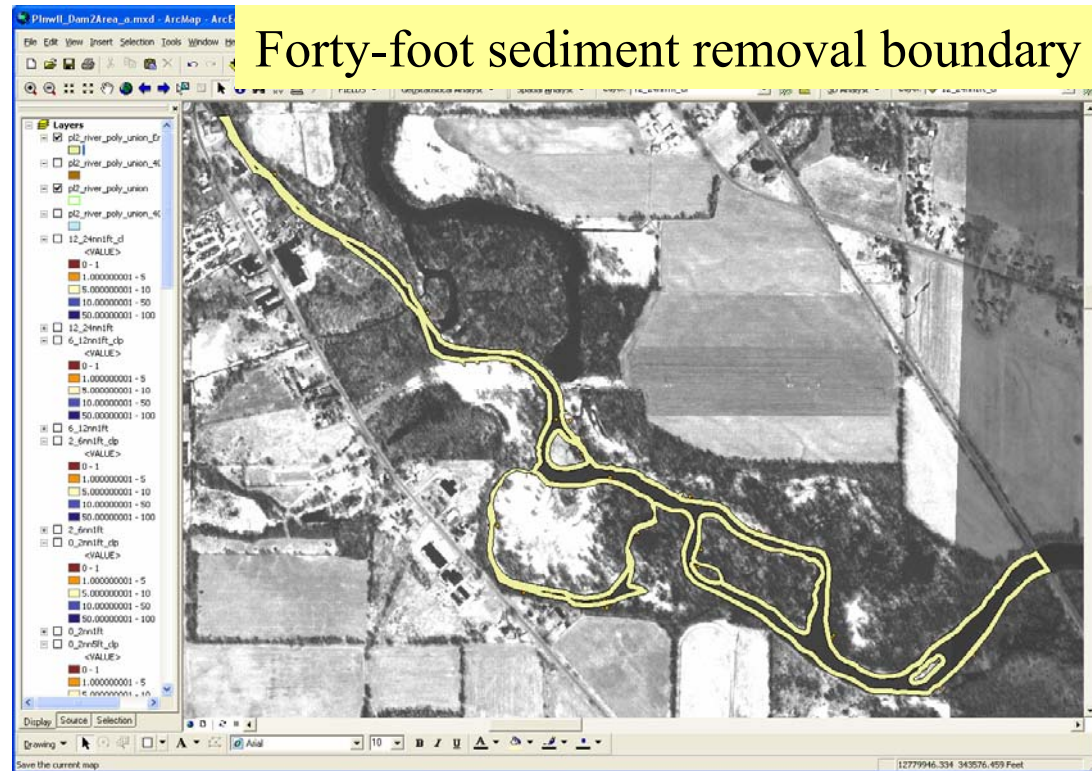
No apparent clustering is detected at this scale.

Close

Sediment data for Total PCBs

Estimates of mass and volume of Total PCBs in the 40-foot sediment removal boundary along shoreline. (Total PCBs are from Natural Neighbor estimates of Depth-Weighted Average (DWA) Total PCBs by interval.)

- see following slides
- used “Remediation and Mass/Volume” tool in FIELDS Tools for ArcGIS



0-2" DWA interval & 2-6" DWA interval & 6-12" DWA interval & 12-24" DWA interval

Mass Volume Report

Summary

MASS-VOLUME REPORT

Raster Layers:

Grid: 0_2nn2ft_40 : Source =
D:\gis\projects\fields\Kalamazoo\samplepts\ARCADIS\SRI_Area_1_Phase_2\Plainwell_No_2_Dam_Area\john_shapefiles\0_2nn2ft_40
Grid: 2_6nn2ft_40 : Source =
D:\gis\projects\fields\Kalamazoo\samplepts\ARCADIS\SRI_Area_1_Phase_2\Plainwell_No_2_Dam_Area\john_shapefiles\2_6nn2ft_40
Grid: 6_12nn2ft_40 : Source =

| Name | Top Depth (inches) | Bottom Depth (inches) | Min. Conc. | Max. Conc. | Density (lb/yd3) | Vol (cu yd) | Mass (lb) | Vol (cu m) | Mass (kg) |
|---------------|--------------------|-----------------------|------------|------------|------------------|--------------|------------|--------------|-----------|
| 0_2nn2ft_40 | 0 | 2 | 0 | 0.999 | 2500 | 3,287.55555 | 3,101.00 | 2,513.51657 | 1,406.59 |
| 0_2nn2ft_40 | 0 | 2 | 1 | 4.999 | 2500 | 2,165.30864 | 10,424.88 | 1,655.49724 | 4,728.65 |
| 0_2nn2ft_40 | 0 | 2 | 5 | 9.999 | 2500 | 333.90123 | 6,023.85 | 255.28581 | 2,732.37 |
| 0_2nn2ft_40 | 0 | 2 | 10 | 49.999 | 2500 | 671.30864 | 29,787.98 | 513.25228 | 13,511.60 |
| 0_2nn2ft_40 | 0 | 2 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 6,458.07407 | 49,337.71 | 4,937.55190 | 22,379.21 |
| 2_6nn2ft_40 | 2 | 6 | 0 | 0.999 | 2500 | 6,888.24691 | 5,419.62 | 5,266.44264 | 2,458.30 |
| 2_6nn2ft_40 | 2 | 6 | 1 | 4.999 | 2500 | 4,660.14814 | 27,893.77 | 3,562.93890 | 12,652.40 |
| 2_6nn2ft_40 | 2 | 6 | 5 | 9.999 | 2500 | 759.95062 | 13,214.97 | 581.02394 | 5,994.21 |
| 2_6nn2ft_40 | 2 | 6 | 10 | 49.999 | 2500 | 604.98765 | 29,619.92 | 462.54625 | 13,435.37 |
| 2_6nn2ft_40 | 2 | 6 | 50 | 100 | 2500 | 2,567.90 | 0.41234 | 1,963.30 | 0,187.04 |
| Subtotals: | | | | | | 12,915.90122 | 76,560.62 | 9,874.91502 | 34,727.31 |
| 6_12nn2ft_40 | 6 | 12 | 0 | 0.999 | 2500 | 18,018.88887 | 12,115.09 | 13,776.42902 | 5,495.31 |
| 6_12nn2ft_40 | 6 | 12 | 1 | 4.999 | 2500 | 1,306.88889 | 4,752.38 | 999.18825 | 2,155.64 |
| 6_12nn2ft_40 | 6 | 12 | 5 | 9.999 | 2500 | 34,740.74 | 0.60317 | 26,561.20 | 0,273.59 |
| 6_12nn2ft_40 | 6 | 12 | 10 | 49.999 | 2500 | 5,481.48 | 0.17912 | 4,190.89 | 0,081.25 |
| 6_12nn2ft_40 | 6 | 12 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 19,365.99998 | 17,649.76 | 14,806.36937 | 8,005.80 |
| 12_24nn2ft_40 | 12 | 24 | 0 | 0.999 | 2500 | 36,188.59256 | 14,757.88 | 27,668.16424 | 6,694.06 |
| 12_24nn2ft_40 | 12 | 24 | 1 | 4.999 | 2500 | 2,567.40740 | 10,133.96 | 1,962.92380 | 4,596.69 |
| 12_24nn2ft_40 | 12 | 24 | 5 | 9.999 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 12_24nn2ft_40 | 12 | 24 | 10 | 49.999 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 12_24nn2ft_40 | 12 | 24 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 38,755.99996 | 24,891.84 | 29,631.08805 | 11,290.75 |
| GRAND TOTALS: | | | | | | 77,495.97523 | 168,439.93 | 59,249.92434 | 76,403.07 |

Sediment data for Total PCBs

Estimate of mass and volume of Total PCBs in the oxbow sediment. (Total PCBs are from Natural Neighbor estimates of Depth-Weighted Average (DWA) Total PCBs by interval.)

- see following slides
- used “Remediation and Mass/Volume” tool in FIELDS Tools for ArcGIS

The screenshot shows the 'Define Layers for Mass, Volume and Remediation' dialog box. It is divided into several sections for configuring data layers and calculations.

Select Intervals:

- Select Grid: 6_12nn1ft_ox
- Top Depth: 6
- Bottom Depth: 12
- Concentration Units: PPM
- Depth Units: inches
- Buttons: Add Grid to List, Remove Grid From List

Depth Settings:

- ☐ Total Depth Grid
- ☒ Set Single Value For Depth: 12.001
- Depth Units: inches

Concentration Ranges:

- ☐ Calculate Remediation and Mass/Volume
- ☒ Calculate Mass/Volume Only (No Remediation)
- Min Concentration: [] PPM
- Max Concentration: [] PPM
- Buttons: Add Range to List, Remove Range from List

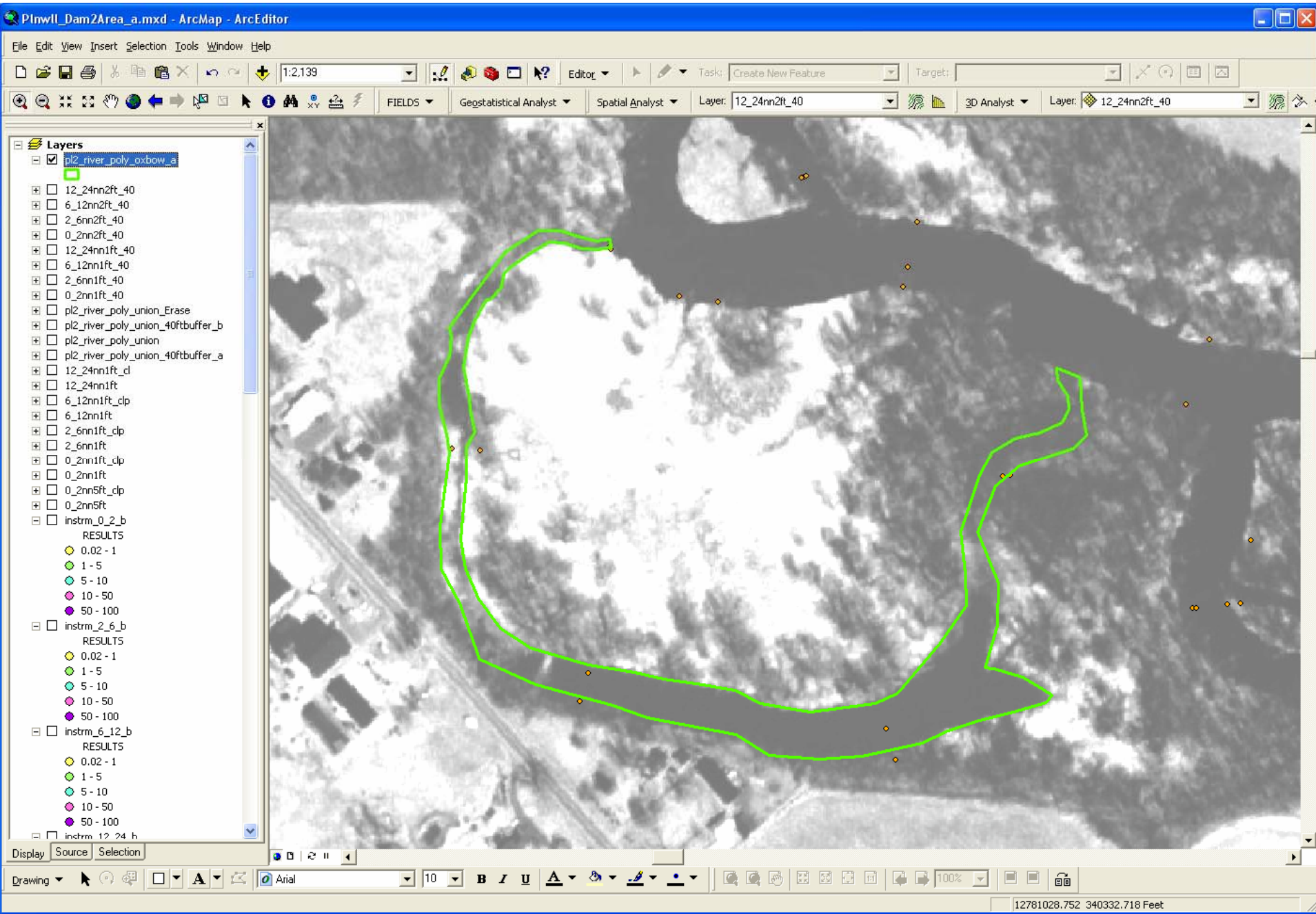
Sediment/Soil Density:

- ☒ Dry Density: 2500
- ☐ Wet Density: []
- Density Units: lb/yd3
- % Solids: []
- Buttons: OK, Cancel, Reset Values

Interval List:

| Interval | Value |
|--------------|-------|
| 0_2nn1ft_ox | 0 |
| 2_6nn1ft_ox | 2 |
| 6_12nn1ft_ox | 6 |

Oxbow polygon used for instream data



0-2" DWA interval

Statistics Of Grid

Grid: 0_2nn1ft_ox

Statistics for 0_2nn1ft_ox

Average: 3.00761448313153
Std Dev: 3.52135245991604
Minimum: 0.870575726032257
Maximum: 19.3017635345459
Median: 1.63641715049744

Plnwl Dam2Area_a.mxd - ArcMap - ArcEditor

File Edit View Insert Selection Tools Window Help

1:2,215 Editor Task: Create New Feature Target: Layer: 12_24nn2ft_40 3D Analyst

- Layers**
- ☒ pl2_river_poly_oxbow_a
 - ☐ 6_12nn2ft_clp
 - ☐ 2_6nn2ft_clp
 - ☐ 0_2nn2ft_clp
 - ☒ 0_2nn1ft_ox
 - <VALUE>
 - ☐ 0 - 1
 - ☐ 1.000000001 - 5
 - ☐ 5.000000001 - 10
 - ☐ 10.00000001 - 50
 - ☐ 50.00000001 - 100
 - ☒ 2_6nn1ft_ox
 - ☒ 6_12nn1ft_ox
 - ☐ 12_24nn2ft_40
 - ☐ 6_12nn2ft_40
 - ☐ 2_6nn2ft_40
 - ☐ 0_2nn2ft_40
 - ☐ 12_24nn1ft_40
 - ☐ 6_12nn1ft_40
 - ☐ 2_6nn1ft_40
 - ☐ 0_2nn1ft_40
 - ☐ pl2_river_poly_union_Erase
 - ☐ pl2_river_poly_union_40ftbuffer_b
 - ☐ pl2_river_poly_union
 - ☐ pl2_river_poly_union_40ftbuffer_a
 - ☐ 12_24nn1ft_cl
 - ☐ 12_24nn1ft
 - ☐ 6_12nn1ft_clp
 - ☐ 6_12nn1ft
 - ☐ 2_6nn1ft_clp
 - ☐ 2_6nn1ft
 - ☐ 0_2nn1ft_clp
 - ☐ 0_2nn1ft
 - ☐ 0_2nn5ft_clp
 - ☐ 0_2nn5ft
 - ☐ instrm_0_2_b
 - RESULTS
 - ☐ 0.02 - 1
 - ☐ 1 - 5
 - ☐ 5 - 10
 - ☐ 10 - 50
 - ☐ 50 - 100
 - ☐ instrm_2_6_b
 - RESULTS
 - ☐ 0.02 - 1

Display Source Selection

Drawing Arial 10 B I U A 100%

12780881.982 340683.941 Feet

2-6" DWA interval

Statistics Of Grid

Grid: 2_6nn1ft_ox

Statistics for 2_6nn1ft_ox

Average: 5.51917312194138

Std Dev: 7.85900662192917

Minimum: 0.675706684589386

Maximum: 31.3628196716309

Median: 2.70924890041351

Plnwl_Dam2Area_a.mxd - ArcMap - ArcEditor

File Edit View Insert Selection Tools Window Help

1:2,215

Editor

Task: Create New Feature

Target:

12_24nn2ft_40

3D An

Layers

☒ pl2_river_poly_oxbow_a

☐ 6_12nn2ft_clp

☐ 2_6nn2ft_clp

☐ 0_2nn2ft_clp

☐ 0_2nn1ft_ox

☒ 2_6nn1ft_ox

<VALUE>

☐ 0 - 1

☐ 1.000000001 - 5

☐ 5.000000001 - 10

☐ 10.00000001 - 50

☐ 50.00000001 - 100

☒ 6_12nn1ft_ox

☐ 12_24nn2ft_40

☐ 6_12nn2ft_40

☐ 2_6nn2ft_40

☐ 0_2nn2ft_40

☐ 12_24nn1ft_40

☐ 6_12nn1ft_40

☐ 2_6nn1ft_40

☐ 0_2nn1ft_40

☐ pl2_river_poly_union_Erase

☐ pl2_river_poly_union_40ftbuffer_b

☐ pl2_river_poly_union

☐ pl2_river_poly_union_40ftbuffer_a

☐ 12_24nn1ft_cl

☐ 12_24nn1ft

☐ 6_12nn1ft_clp

☐ 6_12nn1ft

☐ 2_6nn1ft_clp

☐ 2_6nn1ft

☐ 0_2nn1ft_clp

☐ 0_2nn1ft

☐ 0_2nn5ft_clp

☐ 0_2nn5ft

☐ instrm_0_2_b

RESULTS

☐ 0.02 - 1

☐ 1 - 5

☐ 5 - 10

☐ 10 - 50

☐ 50 - 100

☐ instrm_2_6_b

RESULTS

☐ 0 02 - 1

Display Source Selection

Drawing

10

B I U

A

100%

12780918.518 340041.672 Feet

6-12" DWA interval

Statistics Of Grid

Grid: 6_12nn1ft_ox

Statistics for 6_12nn1ft_ox

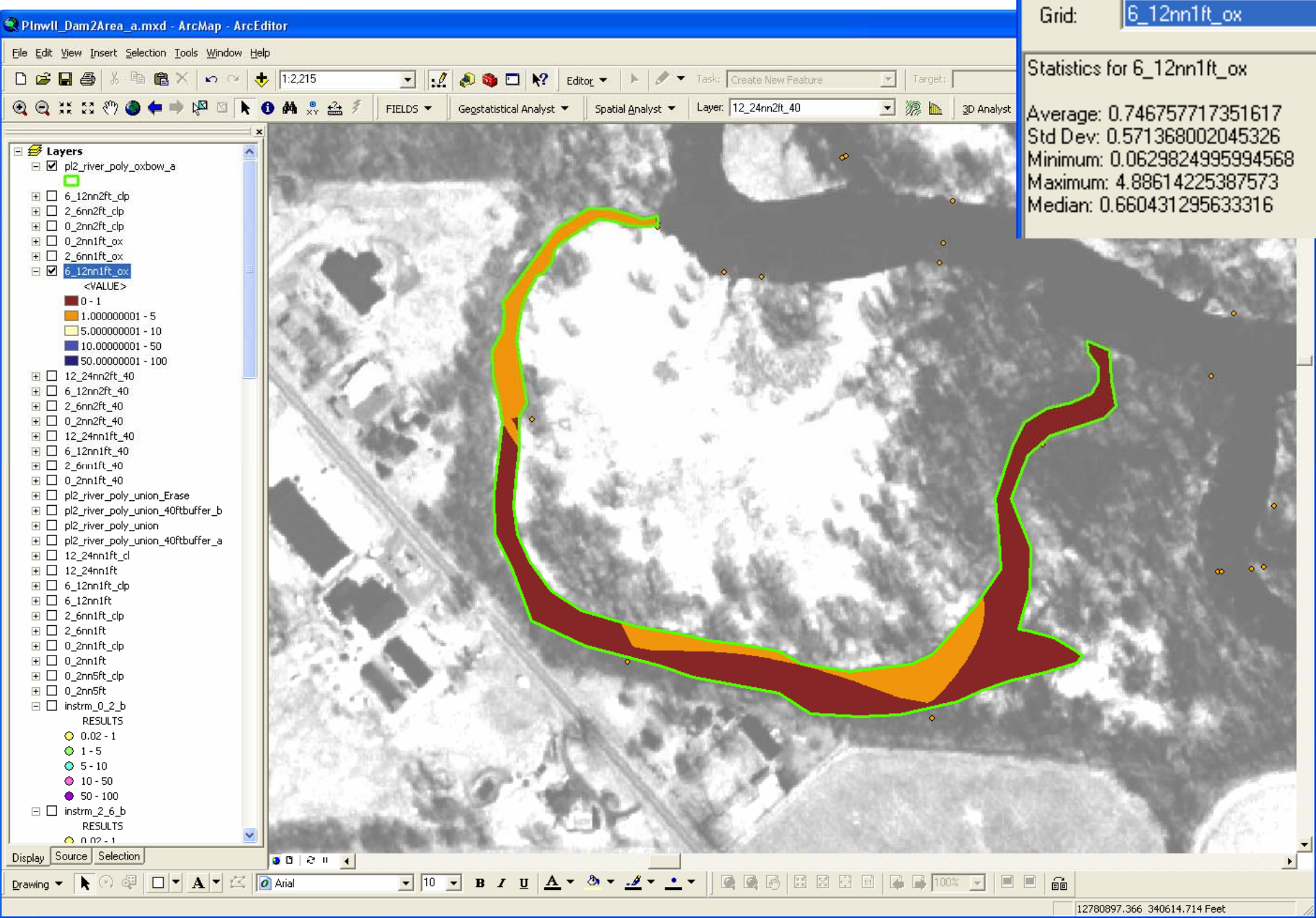
Average: 0.746757717351617

Std Dev: 0.571368002045326

Minimum: 0.0629824995994568

Maximum: 4.88614225387573

Median: 0.660431295633316



0-2" DWA interval

2-6" DWA interval

6-12" DWA interval

Mass Volume Report

Summary

MASS-VOLUME REPORT

Raster Layers:

Grid: 0_2nn1ft_ox : Source =
D:\gis\projects\fields\Kalamazoo\samplepts\ARCADIS\SRI_Area_1_Phase_2\Plainwell_No_2_Dam_Area\john_shapefiles\0_2nn1ft_ox
Grid: 2_6nn1ft_ox : Source =
D:\gis\projects\fields\Kalamazoo\samplepts\ARCADIS\SRI_Area_1_Phase_2\Plainwell_No_2_Dam_Area\john_shapefiles\2_6nn1ft_ox
Grid: 6_12nn1ft_ox : Source =

| Name | Top Depth (inches) | Bottom Depth (inches) | Min. Conc. | Max. Conc. | Density (lb/yd3) | Vol (cu yd) | Mass (lb) | Vol (cu m) | Mass (kg) |
|---------------|--------------------|-----------------------|------------|------------|------------------|-------------|-----------|-------------|-----------|
| 0_2nn1ft_ox | 0 | 2 | 0 | 0.999 | 2500 | 6.01852 | 0.01412 | 4.60149 | 0.00640 |
| 0_2nn1ft_ox | 0 | 2 | 1 | 4.999 | 2500 | 923.51234 | 3.78182 | 706.07585 | 1.71540 |
| 0_2nn1ft_ox | 0 | 2 | 5 | 9.999 | 2500 | 11.24074 | 0.22072 | 8.59416 | 0.10012 |
| 0_2nn1ft_ox | 0 | 2 | 10 | 49.999 | 2500 | 136.07407 | 4.08040 | 104.03609 | 1.85084 |
| 0_2nn1ft_ox | 0 | 2 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 1,076.84568 | 8.09706 | 823.30759 | 3.67276 |
| ----- | | | | | | | | | |
| 2_6nn1ft_ox | 2 | 6 | 0 | 0.999 | 2500 | 208.40741 | 0.46006 | 159.33890 | 0.20868 |
| 2_6nn1ft_ox | 2 | 6 | 1 | 4.999 | 2500 | 1,594.35802 | 10.14357 | 1,218.97417 | 4.60105 |
| 2_6nn1ft_ox | 2 | 6 | 5 | 9.999 | 2500 | 51.83951 | 0.80570 | 39.63415 | 0.36546 |
| 2_6nn1ft_ox | 2 | 6 | 10 | 49.999 | 2500 | 298.20988 | 18.30569 | 227.99781 | 8.30332 |
| 2_6nn1ft_ox | 2 | 6 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 2,152.81481 | 29.71503 | 1,645.94502 | 13.47851 |
| ----- | | | | | | | | | |
| 6_12nn1ft_ox | 6 | 12 | 0 | 0.999 | 2500 | 2,254.22222 | 2.48068 | 1,723.47655 | 1.12522 |
| 6_12nn1ft_ox | 6 | 12 | 1 | 4.999 | 2500 | 974.09259 | 3.54476 | 744.74722 | 1.60787 |
| 6_12nn1ft_ox | 6 | 12 | 5 | 9.999 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 6_12nn1ft_ox | 6 | 12 | 10 | 49.999 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| 6_12nn1ft_ox | 6 | 12 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 3,228.31481 | 6.02544 | 2,468.22377 | 2.73309 |
| ----- | | | | | | | | | |
| GRAND TOTALS: | | | | | | 6,457.97530 | 43.83752 | 4,937.47639 | 19.88437 |

Print Summary

Print Details

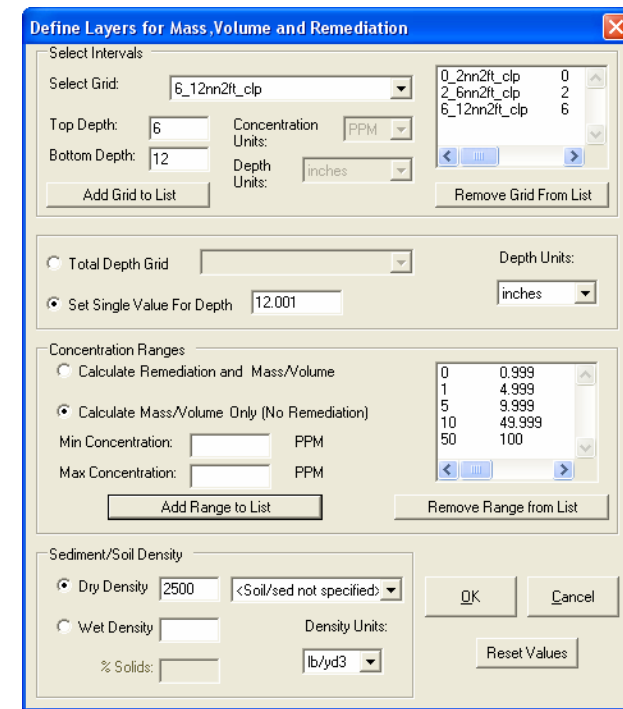
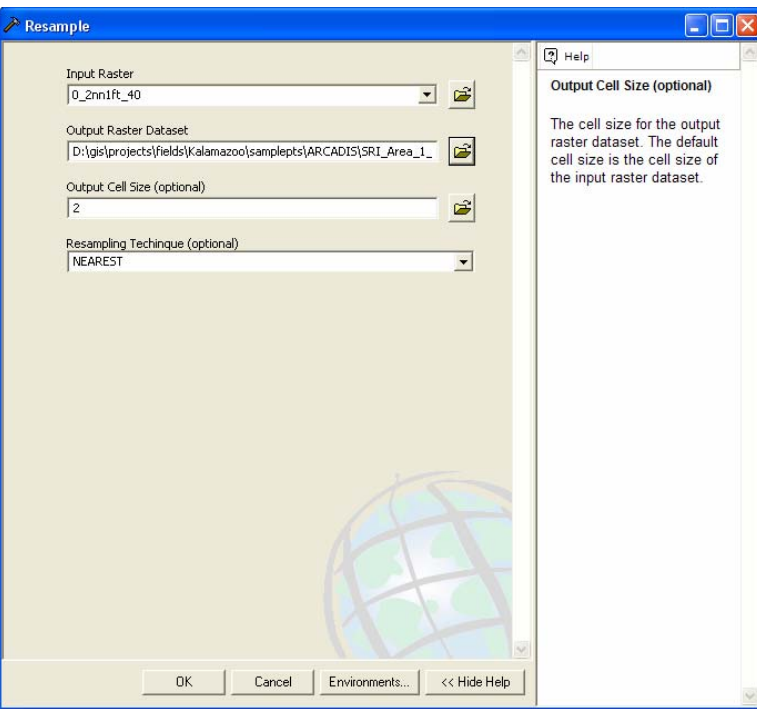
Save Text

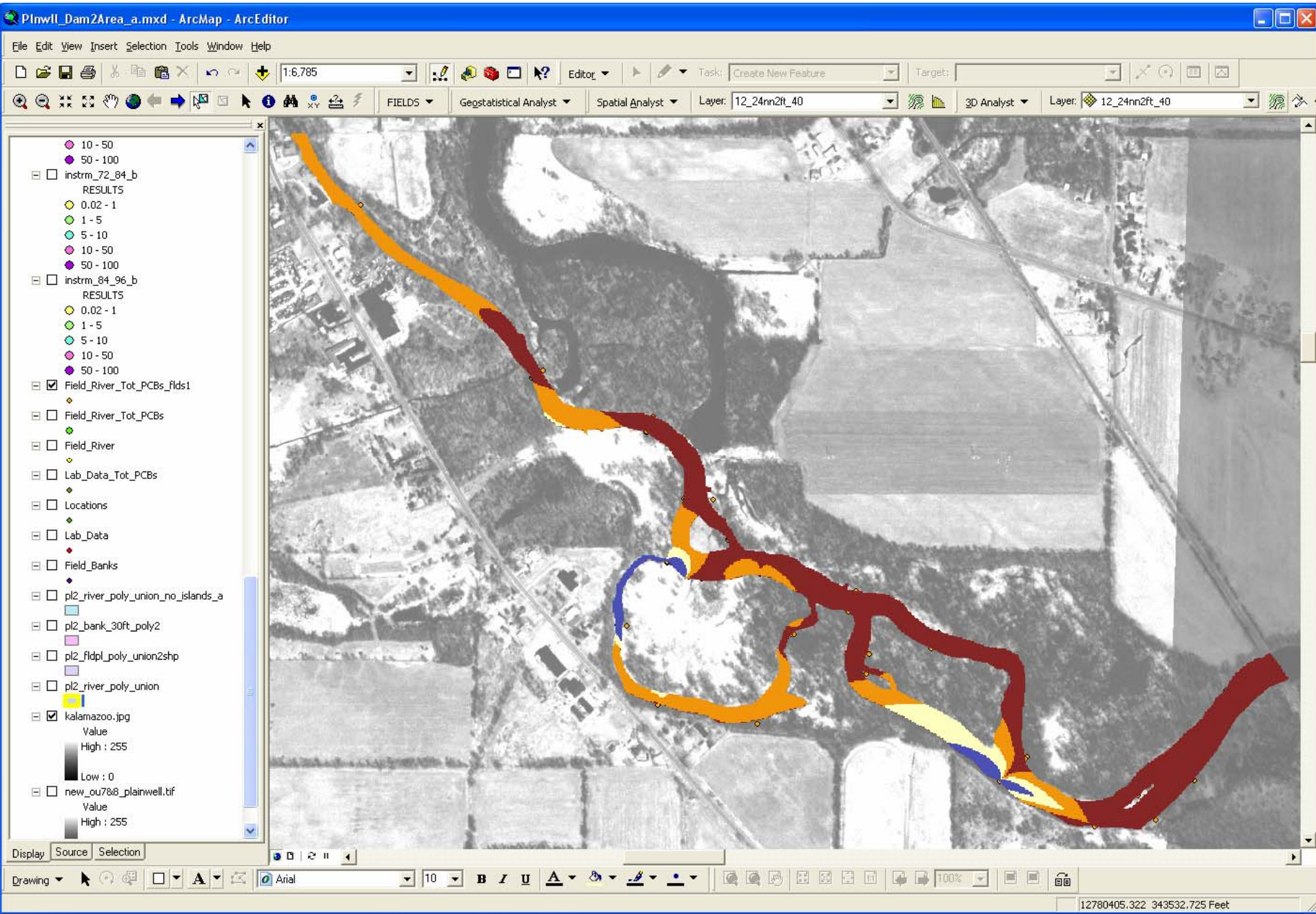
OK

Sediment data for Total PCBs

Estimate of mass and volume of Total PCBs in the river sediment. (Total PCBs are from Natural Neighbor estimates of Depth-Weighted Average (DWA) Total PCBs by interval.)

- see following slides
- use “Remediation and Mass/Volume” tool in FIELDS Tools for ArcGIS
 - tool required less dense grid, grids resampled to 2-foot cells





0-2" DWA interval

2-6" DWA interval

6-12" DWA interval

Mass Volume Report

Summary

MASS-VOLUME REPORT

Raster Layers:

Grid: 0_2nn2ft_clp : Source =

D:\gis\projects\fields\Kalamazoo\samplepts\ARCADIS\SRI_Area_1_Phase_2\Plainwell_No_2_Dam_Area\john_shapefiles\0_2nn2ft_clp

Grid: 2_6nn2ft_clp : Source =

D:\gis\projects\fields\Kalamazoo\samplepts\ARCADIS\SRI_Area_1_Phase_2\Plainwell_No_2_Dam_Area\john_shapefiles\2_6nn2ft_clp

Grid: 6_12nn2ft_clp : Source =

| Name | Top Depth (inches) | Bottom Depth (inches) | Min. Conc. | Max. Conc. | Density (lb/yd3) | Vol (cu yd) | Mass (lb) | Vol (cu m) | Mass (kg) |
|---------------|--------------------|-----------------------|------------|------------|------------------|--------------|-----------|--------------|-----------|
| 0_2nn2ft_clp | 0 | 2 | 0 | 0.999 | 2500 | 5,044.83950 | 4.32088 | 3,857.05655 | 1.95992 |
| 0_2nn2ft_clp | 0 | 2 | 1 | 4.999 | 2500 | 2,982.93827 | 14.88688 | 2,280.61994 | 6.75257 |
| 0_2nn2ft_clp | 0 | 2 | 5 | 9.999 | 2500 | 522.91358 | 9.53753 | 399.79612 | 4.32615 |
| 0_2nn2ft_clp | 0 | 2 | 10 | 49.999 | 2500 | 1,135.92592 | 51.39004 | 868.47768 | 23.31013 |
| 0_2nn2ft_clp | 0 | 2 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 9,686.61727 | 80.13532 | 7,405.95029 | 36.34877 |
| ----- | | | | | | | | | |
| 2_6nn2ft_clp | 2 | 6 | 0 | 0.999 | 2500 | 11,150.46912 | 8.72321 | 8,525.14534 | 3.95678 |
| 2_6nn2ft_clp | 2 | 6 | 1 | 4.999 | 2500 | 5,959.16049 | 36.18317 | 4,556.10510 | 16.41241 |
| 2_6nn2ft_clp | 2 | 6 | 5 | 9.999 | 2500 | 1,482.17284 | 26.47673 | 1,133.20244 | 12.00964 |
| 2_6nn2ft_clp | 2 | 6 | 10 | 49.999 | 2500 | 777.72839 | 34.45635 | 594.61602 | 15.62914 |
| 2_6nn2ft_clp | 2 | 6 | 50 | 100 | 2500 | 2.56790 | 0.41234 | 1.96330 | 0.18704 |
| Subtotals: | | | | | | 19,372.09875 | 106.25180 | 14,811.03221 | 48.19501 |
| ----- | | | | | | | | | |
| 6_12nn2ft_clp | 6 | 12 | 0 | 0.999 | 2500 | 27,522.74071 | 16.40625 | 21,042.64512 | 7.44175 |
| 6_12nn2ft_clp | 6 | 12 | 1 | 4.999 | 2500 | 1,489.18518 | 5.40041 | 1,138.56377 | 2.44958 |
| 6_12nn2ft_clp | 6 | 12 | 5 | 9.999 | 2500 | 34.74074 | 0.60317 | 26.56120 | 0.27359 |
| 6_12nn2ft_clp | 6 | 12 | 10 | 49.999 | 2500 | 5.48148 | 0.17912 | 4.19089 | 0.08125 |
| 6_12nn2ft_clp | 6 | 12 | 50 | 100 | 2500 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Subtotals: | | | | | | 29,052.14812 | 22.58895 | 22,211.96098 | 10.24618 |
| ----- | | | | | | | | | |
| GRAND TOTALS: | | | | | | 58,110.86414 | 208.97608 | 44,428.94348 | 94.78995 |

Print Summary

Print Details

Save Text

OK